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ABSTRACT

Radio broadcasting is an effective vehicle for providing literacy and fundamental education for large numbers of people with a reasonable investment of time, money, and human energy. This monograph, addressed to literacy workers in the rural areas of the Third World, offers practical suggestions for establishing literacy programs based on radio production. Topics discussed include the following: reasons why radio is effective in reaching large numbers of learners; the audience--their basic needs, attitudes, and preferences; program planning and development; production and distribution; effective use of the radio, including prebroadcast activities and follow-up games and puzzles to expand basic skills; maintenance of literacy skills for new literates and inservice programs for field workers; evaluation and effective feedback; and sources of information on mass media in adult education. (MAI)

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The use of radio in adult literacy education

Richard C. Burke
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The International Institute for Adult Literacy Methods was established in 1968 under an agreement between Unesco and the Government of Iran. Its functions are to provide documentation, research and training services on methods, media, materials and techniques of adult literacy. The IIALM operates a documentation service and publishes three journals: *Literacy Discussion* and *Literacy Work* appear quarterly; *Literacy Documentation* is published three times annually. A Governing Board composed of representatives of Unesco and the Governments of Iran and Pakistan oversees the programme of the Institute.

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Invitation to the reader

Reading a book can be like conversing with a knowledgeable friend. However, even the most well-written book is a one-way conversation. The author speaks and the reader listens. Sometimes the author anticipates the reader's thoughts and questions. Otherwise, the questions remain unanswered.

The International Institute for Adult Literacy Methods (IIALM) wishes to assist the reader of this monograph (and other monographs in this series) to engage in a genuine dialogue. We live today in a world where communications between most parts of the world are reasonably fast, most often dependable and not too expensive. We suggest that the reader send his questions to the IIALM—general and specific—as well as his problems in working with these materials. The Institute would be glad to help or put the reader in touch with someone who can.

The reader should let the Institute know if, in his judgment, this monograph has succeeded in doing what it started out to do: (a) to give middle-level adult literacy workers an understanding of the possibilities of radio in adult literacy programmes; (b) to help them visualize their role in the network of collaboration necessary for developing an effective instructional system; and (c) to provide practical suggestions to enable adult literacy workers to put these ideas to work in improving instruction in their adult literacy programmes.

IIALM would like to hear of any suggestions the reader may have about improvements to this monograph in a subsequent edition. With the readers' help, IIALM can indeed become a significant institution, an international correspondence college on literacy. There is the need. The address to write to is:

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An overview of the use of radio in literacy: notes from the Editor

If necessity is indeed the mother of invention, the use of radio in teaching literacy should have been widespread all over the world. Literacy has been called a necessity for present-day life. Leaders of developing countries—where most of the world's illiterates live—have described illiteracy as the shame of nations. Some of them have promoted it for its civilizing influence. Others have gone further. Literacy, they suggest, is not merely a matter of honour and civility; it could make the difference between plenty and poverty. Literate farmers are needed for producing more from their fields. Literate workers are needed for producing more in the factories. Literate men and women are needed for making social and political arrangements humane; for making democracy work.

Why then has a serious attack on illiteracy not been made? Why do we have more illiterates today in the world than we had in 1960 or 1970? The causes are complex.

In most cases, while the denunciations of illiteracy have been loud, commitments needed for its eradication have not followed. Sometimes programmes for teaching literacy have been actively opposed. They have been opposed because literacy would challenge existing privileges of sons over daughters, of husbands over wives, and of some social classes over others.

Even when nations have wanted to eradicate illiteracy, they have faced serious dilemmas in making policy decisions. Literacy programmes have lost out when competing for resources with other programmes and projects. The sting of ignorance is not seen, and illiteracy gives the illiterate no pain. Some even say that literacy may indeed make life more painful by opening up new horizons for people and raising their levels of aspiration. Therefore, in competition for scarce resources, literacy loses to the village clinic that will perhaps cure the sick and prevent some physical suffering. Literacy also loses to agricultural extension, for food fills stomachs and words do not. The argument that, ultimately, literacy

would improve production and community health standards falls on deaf ears. Then there are roads to be built, airports to be constructed, and guns, warships and tanks to be bought for national defence against real and imagined enemies. Finally, education for the young competes with the education of the adult farmer, worker and housewife. Schools have to be supported because they have always been there. More schools have to be opened since there are more children around, and parents demand more schools to enrol their children.

The variety of resources that would be needed for the eradication of illiteracy in a typical developing society is by no means small. Indeed the resources needed for delivering a national, or even regional, literacy programme are simply mind-boggling. Needed are teachers, monitors, animators, supervisors and administrators; all these people require training. Needed are primers, graded books, workbooks, teachers' guides, graphic instructional materials and exercise books; all these have to be printed and distributed. Training of personnel and printing and distribution of materials requires an organization with adequate administrative and professional capacities. Printing, communication, transport and distribution require an infrastructure of roads, railways, mail services, telephones and markets.

Can technology help? More importantly, can radio help the developing countries, with their manifold scarcities, in making their people literate? The answer, fortunately, is that it can. Of course, radio cannot create resources out of thin air. It cannot turn good intentions into the hard currency needed to buy equipment. Nations would still need to make commitments. They would still need resources. But these resources would have to be used differently and they would, ultimately, take a nation farther towards its goals than traditional approaches to literacy teaching ever would. Radio would help solve the problems of inadequate infrastructures because radio waves do not use roads or railways. Radio would help solve the problem of trained manpower because it can put a master teacher in the middle of every listening group. It can also train its monitors and animators by the radio itself. Radio can also reduce to some extent the problem of producing huge quantities of instructional materials.

If radio can be so helpful in literacy teaching why has radio not been used in teaching literacy? The question is legitimate. In most developing countries of the world, the educational use of radio presents a dismal picture. Its use in teaching reading and writing has been even more discouraging. Why has radio not been used even when this medium has

been available to the Third World countries for years? Some causes can be listed.

Most of those who are now in important decision-making positions in education and development in the Third World were *not* educated by radio. The homes they grew up in did not have radios. The schools they went to did not use radio to teach. Indeed, radio was seen as entertainment and was often forbidden in school. Schools were for serious business! Those of our decision makers who went for higher education were given a liberal education. They got in touch with what C. P. Snow has called the humanist culture, but they remained alien to the scientific culture. It is not surprising that technological solutions to educational problems have often not occurred to them.

There is another problem. As social beings we develop conditioned responses with regard to the functions assigned to our cultural media. Most of us visualize radio as a source of entertainment. Sometimes radio brings news but most of the time it brings songs, music, plays and other features that entertain. Our cultural habits in regard to radio have fettered the imagination of both educators and communities. Educators and other decision makers find it hard to change their perception of radio. They cannot think of it as being an instrument of education and literacy. The expectations of listeners from radio are even more hardened. Listening groups all over the world have come to acquire a particular relationship with their radios. Sometimes radio may inform but most of the time it must entertain. Talking individually to the listener in order to teach him how to read and write is not commonly expected of radio.

Even those who are rationally persuaded about the usefulness of radio for education do not see how radio could be used to teach reading and writing. Radio is a medium that uses sound; reading and writing require seeing and doing. They do not always understand the concept of an *integrated system of instruction* in which radio plays its own part while local monitors, teachers and supervisors use instructional materials especially prepared for literacy programmes. Together, the various elements achieve the objectives that could not be achieved individually. The studio teacher is a master teacher who is connected with monitors in the field. The radio script is systematically integrated with printed lessons in the workbooks and monitors' guides. These materials are made available to groups and communities in the field. The master teacher speaks in the studio while the monitors in classes interpret him to the learners. Some-

times the broadcast is used to teach reading, sometimes to motivate, sometimes to inform about farming, childcare, health, nutrition and other interests of the listening groups.

When decision makers do understand the need for an integrated system of instruction, they are dismayed by the type of organization that would be necessary on the ground to make a radio literacy programme effective. Groups must still be organized; monitors and other volunteers must still be recruited; receiving sets must be made available. Integrated materials must be designed, produced and distributed and field workers trained. Listeners must be helped to develop a new relationship towards punctuality since groups must be assembled on time to receive radio programmes. The clock must begin to govern the lives of the learners.

In presenting this monograph we have made the assumption that, even though the use of radio would place important demands on administrators and organizers, the decision to use radio in literacy programmes would be a good one in the long run, both in terms of coverage and per capita costs.

This monograph is addressed to those field workers who are already working with radio as well as to those who might work with radio in the future. Those who have not yet worked with radio, and see the possibilities of working with it only in the distant future, may still find the monograph useful. In specific cases it may also enable field workers to participate in decision making when it is necessary to make policy decisions about radio in literacy. It should prepare them for assuming positions of leadership at various levels when decisions on the use of radio in literacy programmes are actually made. At the very least, the monograph should illuminate the processes underlying the work that field workers must undertake as part of any literacy project. In discussing what radio can do and what it cannot do we are asking questions about relationships between the medium and the message. We are raising questions about objectives on the one hand and methodologies on the other. These questions are of interest to all literacy workers.

The monograph is addressed to the middle-level worker in the field of adult literacy. By a middle-level worker we mean an individual who does not spend all his time in planning and administration in the upper levels of the bureaucratic hierarchy. He is in touch with literacy work in the field. At the same time, he does not spend all his time with a single group of adults in a particular community. He works in a situation in which he

is responsible for the implementation of a programme, with the assistance of a number of people—literacy teachers, monitors, community leaders and supervisors. He may sometimes be the head of a district-level literacy programme, or he may be working as a specialist on a team responsible for a large regional project.

Some special objectives of the monograph must be pointed out. First, the author has looked at the use of radio in literacy from the vantage point of the practitioner. He surveys the field with the practitioner's eye. The suggestions he makes are practical suggestions. Field workers should be able to act on those suggestions. Second, the suggestions made allow the middle-level worker to procede autonomously, that is, he does not have to wait for the powers-that-be to be persuaded and convinced before he could put these ideas into practice. Once he has received the mandate to do a good job, he can go ahead and put these ideas to work. He only has to motivate the community leaders and enthuse his monitors and volunteers.

One can think of many different contexts and settings for the use of radio in literacy. Political arrangements differ from country to country. Patterns of media ownership also differ. In some countries the government owns the radio and decides what uses should be made of it. In some countries media are privately owned and utilization is determined by commercial interests and, presumably, by listeners' interests. There are some countries where radio stations are owned both by public and private interests. The monograph that is presented here is a how-to-do-it monograph. It talks of how to teach literacy by radio and how to inform listeners generally about improvements in their homes, fields and shops. It does not assume any exclusive ideological position. Our hope is, though, that field workers would use the monograph to be effective educators in promoting learning that both informs and liberates.

We realize that we have addressed this monograph to literacy workers in the rural areas of the Third World. There are, of course, illiterates in urban slums of the Third World as well, and in what is called the inner city of the developed world. Some of what we have said in this monograph will be applicable to all programmes in various demographic situations. But we hope to address a separate monograph to problems of literacy organization in the urban slum and the inner city.

Yet, literacy projects and programmes also differ among themselves in terms of their philosophies, and content and methods of teaching and

training. We hear of traditional literacy, work-oriented literacy and various versions of functional literacy. Once it has been decided to use radio as part of the delivery system in a literacy project, the questions of pedagogy are more or less general for all literacy projects and programmes. We have written for a functional literacy programme which teaches not only reading and writing but also provides general adult education in such areas as health, hygiene, agriculture and nutrition. The monograph is sensitive to the problem of behavioural change as well. The assumption is that listeners must not only learn but they must also be able to act on what they learn. While radio programmes can be received by the listener in various settings —independently at home (called open broadcasting), in organized groups that learn and make decisions, radio schools and radio clubs—we have assumed a general group setting. Finally, we have taken examples from the Radio Sutatenza of the Colombian Acción Cultural Popular to illustrate some of the points made. This should not suggest that there are no other important radio literacy programmes elsewhere in the world; or that this monograph is addressed only to literacy workers in Latin America. We seek to address all literacy workers all the world over. Again, while most examples are from the Spanish language, this is not a monograph only for those who work with the Spanish language. Readers should make transfers to their own language of literacy—Hindi, Urdu, Bhasha, Kiswahili, Arabic, Farsi, English, French or whatever other language in which they may be teaching reading and writing.

We have presented a picture of the world where use is being made of radio to teach reading and writing and we have put the middle-level field worker right in the middle of the picture. We have shown how things could look in regard to planning, production, utilization and feedback as seen from his vantage point. We have indicated what he could do to help others produce better programmes and thereby to help himself use these programmes more effectively.

One cannot cover everything within the scope of a single monograph. There are topics which have been considered here only in the barest detail. We, therefore, suggest that readers should refer to another title in this series, Sohan Singh's *Learning to read, and reading to learn: an approach to a system of literacy instruction.* That monograph presents in much greater detail the concept of a system of literacy instruction and should enable readers to find answers to some of their questions about reading elements, their treatment and sequencing in teaching reading.

S. Thiagarajan's *Programmed instruction for literacy workers* should suggest many more ideas on the design and use of instructional games. A much more extensive treatment of evaluation would be found in H. S. Bhola's *Evaluating functional literacy*.

H. S. Bhola

Foreword

The purpose of this monograph is to provide literacy field workers with some practical advice about using radio broadcasting as an important and integral part of their work. It is not a production manual for programme producers, nor is it written primarily for project planners and administrators. It is written to help the literacy field worker or organizer in his daily activities as he stimulates people to listen to the radio programmes, sees to it that supplementary materials are distributed on time, trains volunteer monitors or auxiliaries in integrating what they hear over the radio with what they find in the supplementary materials, and gathers information about the effectiveness of the radio programmes.

The field worker plays a key role in bringing about communication between the producers of the radio programmes and the listeners who are learning from them. He reinforces, supplements and clarifies the instructional message of the mass media on an inter-personal basis by helping people to practise their skills of reading and writing and to put to use the knowledge and skills they have gained from the programme materials.

Although it is written for field workers who are just beginning to use radio as part of their literacy teaching, the monograph will have something to say to those who have already had some experience in a radio-based literacy project.

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Introduction

The programme of literacy training that you are now engaged in may be just getting under way, or it may be a programme which has been in operation for quite some time and is generally successful in its methods. In either case, the educational planners, teachers, field workers and all of the other people who are concerned with the teaching of literacy have sensed a feeling of frustration at being unable to reach all, or even a large percentage of, the people who desperately need the basic information and education which will motivate them to participate actively and fully in the processes of social integration.

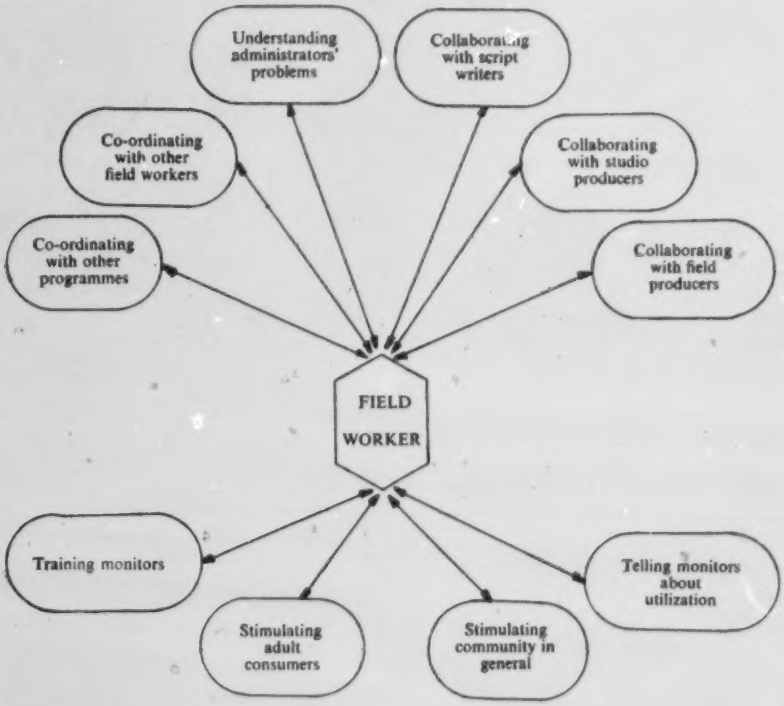
What we are concerned about in this book is reaching as many people as possible, as quickly as possible, with a reasonable investment of time, money and human energy. In the next few chapters, I will attempt to describe some of the features of radio broadcasting that recommend it as a valuable and integral part of any effort to provide literacy and fundamental education to audiences of young people and adults.

Most important is the role that you as a field worker can play in a radio-based literacy programme. In the past we have tended to think of learners and the people who are working directly with them, as passive consumers of radio and television programmes. More recently we have come to realize that learning via the mass media must be an active, participatory process in which learners, their teachers and the producers of programmes and other supplementary materials must work together as a team in acquiring information, solving problems and determining directions for future learning. Perhaps I can give you a clearer idea by putting it into a visual format as in Figure 1.

Since this book is about the role of the field worker in a radio-based literacy project, he has been placed at the centre of the diagram. In so doing, I hope to convey my conviction that the field worker is vital to the success of any project. He helps studio and field producers to identify programming needs and audience preferences; he provides them with

programme evaluation; he co-ordinates his efforts with other field workers and other social development programmes; he organizes listening groups and trains volunteer workers or monitors; and he works with adult learners and members of the community in general to convince them that radio is a learning device, not merely a means of entertainment.

FIGURE 1. *The role of the field worker*



In Chapter One, 'Why radio?', we will examine some of the characteristics of radio that make it worth considering as a central part of a literacy project. I am, by the way, dealing with literacy in a broad context of fundamental adult education. I shall use examples and refer to situations where literacy is intimately linked with adult learning programmes in health, nutrition, family life and human development. However, the discussion should be useful to literacy workers, whatever the format of the literacy programme in which they are working.

In Chapter Two, 'Analysing your audience: who is listening?', we will consider an aspect of radio broadcasting that is frequently ignored: careful analysis of the listening audience. We tend to make assumptions about what people need to know, and quite often, our assumptions have little factual basis. Part of your task as a field worker is to reduce some of the guesswork involved in producing programmes by providing solid information to programme planners about the needs, attitudes and life habits of the listeners.

In Chapters Three and Four we will take a look at the programme planning and development process, and in Chapter Five, we will consider some of the factors involved in actually producing and distributing radio programmes and supplementary materials such as textbooks, workbooks, teacher's guides, posters, wall maps and other aids to learning. Although you may not be extensively involved in producing programmes, your role as a field worker will be greatly enhanced if you understand the contribution that each member of the organization makes to the teaching of literacy.

Chapter Six, 'Using radio effectively', is really the heart of the monograph. It tells you how to organize listening groups, how to train volunteer monitors to help family, friends and neighbours with their new learning efforts, and it contains some specific suggestions for pre- and post-broadcast activities. In this chapter I have used specific examples which are given mainly in English, but with a few in Spanish. It must be borne in mind that they are given only as examples, and that you will, of course, adapt the drill exercises, games and other learning techniques to your own language.

In Chapter Seven we will examine the role of the field worker in helping learners maintain and improve their newly acquired skills in reading and writing. We will also take a look at radio programming that is produced for the continuing education and improvement of the field worker himself.

In Chapter Eight we will discuss the evaluation of programme effects and the need to provide administrators, producers, and specialists in research and evaluation with your observations, comments and criticisms.

Chapter Nine suggests some sources of information which will be useful to you. There is a substantial body of published literature about radio broadcasting and the teaching of functional literacy, and much of it is available in relatively inexpensive publications.

Finally, we sometimes forget that there is an international postal system which functions reasonably well, and there are several organizations throughout the world who will gladly respond to your letters asking for

guidance on starting, developing and maintaining a radio-based literacy project. A few of these organizations are listed in Chapter Nine.

I hope that this book will give you some idea of the ways in which you can participate actively and fully in this most important of all labours —helping people to become active subjects and not mere objects in their own social development.

CHAPTER ONE

Why radio?

In the last two decades, hundreds of articles have been written about television as the all-purpose, pervasive means of mass communication. Quite often these articles are illustrated with photographs showing television-receiving antennas attached to the rooftops of every imaginable type of human dwelling. Usually, these articles try to demonstrate that television has penetrated to every remote corner of the earth bringing with it entertainment, temporary release from daily cares and worries, educational and informational messages, and, in many countries, an endless stream of commercial messages praising an endless line of consumer products. It is often suggested, too, that television has changed the way in which people see their world. By the way in which television actors dress, speak and relate to one another they have provided many different models of behaviour for their audiences.

In our generally enthusiastic response to television, it often seems that radio broadcasting has, in many instances, been relegated to a position of secondary importance. This is unfortunate because radio broadcasting has much to recommend it and it is clearly not a poor relation of the newer and often more glamorous television. Let us look carefully at radio broadcasting as a possible source of support to a new or well-established programme of literacy training.

Reaching more learners

While it may be true that you can find television antennas on rooftops in most countries of the world, it is a feature of modern life that is essentially urban. For the average rural dweller, living three or four hundred kilometres from the nearest urban concentration, television is still an unrealized element in his life.

In Colombia, for example, three separate ranges of the Andes mountains run from north to south in the heavily populated western half of the country. Obviously, transportation and communication are extremely difficult under such adverse geographic conditions. Thousands of rural people live far from any source of progress. They are isolated not only physically, but culturally, which can be far more damaging to the person's state of well-being. It is not at all unusual for rural people of Colombia to spend half a day or more in travelling from their home to a main road in order to take part in a market day. Other countries, in Africa, Asia and the Middle East, also have problems of isolated populations due to mountainous country, distance from urban centres and lack of adequate roadways for communication. For these people, the truly significant means of information, education and entertainment is radio broadcasting and in many countries of the world radio will continue to be the primary means of mass communication for many years to come.

There are, of course, areas of some countries that are still not within easy range of broadcast radio signals, but considerable progress has been made in the last few years in the design and installation of transmitting equipment, so that more and more people each year can receive some radio broadcasting service. We can say then that, for the vast majority of people in this world, it is radio rather than television which deserves to be called the universal medium.

With the invention of the small transistorized radio even more people can be reached. Unlike television and film viewing, the radio listener need not remain fixed in one place in order to receive the information. It is not at all uncommon in many rural areas to see men and women walking along listening to a portable radio carried in a shirt pocket or tied into a shawl or some other item of clothing.

Listener participation

To obtain information from newspapers, magazines and other printed media we must first learn to read, but once we have learned to speak our language, all we need to understand information from the radio is to pay attention to what is being said. Since most non-literate people receive a great deal of their information by word of mouth rather than by reading, radio takes advantage of the listener's pre-disposition to the aural mode and puts it to good use. This is not to say that listening skills cannot be improved and sharpened to yield even better results. A person can be

taught to listen more efficiently, and we will pursue this idea later in the book. For now, it is sufficient to note that a radio listener can participate as a learner in the process of communication without extensive instruction and preparation.

It is often argued that radio is inferior to television and film as a means of communication because radio reaches the single sense of hearing, whereas television and film appeal to both hearing and sight. While it is true that radio cannot provide the visual information by means of the medium itself, it is entirely possible to prepare materials with drawings, illustrations, photographs and other graphic representations to be distributed to the listeners as part of their learning experience. This combination of radio broadcasting and printed visual materials, known in many countries as 'radio-vision', will be discussed later in the book.

It can also be said that radio, by *not* providing explicit visual information, allows members of the listening audience to engage their imaginations fully and actively in filling in the visual elements to their own satisfaction. This is particularly appropriate for radio drama since it is intended to create a so-called 'theatre of the mind' in which a whole world of characters, settings and incidents is created which becomes very real indeed to the listener with a fertile imagination.

Immediacy

When we speak of immediacy with regard to radio broadcasting we really mean two different things. First, we mean immediacy in its literal sense: an important piece of information, an occurrence of great importance, an emergency announcement, can be sent out to listeners immediately, without having to set type for printing, or to process film, or trust to the diffusion of the information by word of mouth. Moments after the decision has been made to present a certain piece of information to listeners throughout a region or an entire country, the message can be transmitted with a minimum of lost time.

Immediacy in the other sense is best described as an attitude or feeling about the message rather than the actual time elements involved in preparing and sending the message. It is a feeling which people have expressed by using such phrases as 'I felt that I was right there' or 'They are talking directly to me'. Some very exciting moments have taken place on radio and we must not underestimate the feelings that people experience

through a means of communication, beyond the medium's capacity for presenting information and structured learning experiences.

Cost

Since it is impossible to state how much it would cost to operate a radio system in absolute terms, it might be helpful to examine cost in comparison with another method of mass distribution, namely television.

One aspect of cost which is quite obvious to even the most casual observer is the fact that a television receiver costs anywhere from ten to twenty times more than a radio receiver. A television set for the average rural family in most countries is prohibitively expensive, and even a single community-purchased receiver is often beyond the collective buying power of a village or small town.

You can imagine then that the cost of television production and transmission equipment is also many times the cost of radio production and transmission equipment. Because the radio broadcast signal, or sound waves as they are called, travel much further than television signals, it costs considerably more to reach isolated parts of a country by television than by radio.

Another cost factor which is very important is that most countries already have the technical facilities to broadcast by radio, and a corps of trained engineers, writers, performers and producers exists. It is certainly much cheaper to take advantage of existing radio facilities than to try to construct a new and expensive system of television broadcasting which may prove to be financially insupportable in a relatively short period of time.

Many countries have made enormous investments in an educational television system only to find out that it soon drained their resources so badly that little money was left to devote to the preparation of supplementary materials or the adequate training of field personnel. Some of these same countries have re-examined their educational policies, and they have come to the conclusion that an established radio broadcasting system offers great financial advantage over a television system which must be constructed in its entirety.

One final factor in considering cost is that radio will invariably give you what is called a 'lower cost per unit' or, in this instance, a lower cost per person reached by the educational message. You can arrive at a cost per unit or a cost per person by dividing the total cost by the number of

people reached. Let us assume, for example, that the construction and operating costs of a radio station amount to 1 million units of your local currency. The total cost of a television station amounts to, let us say, 2 million units of the local currency. Therefore, you say that the television broadcasting system costs twice as much as radio.

On a cost per unit or cost per person reached basis, however, you would see that there is a very different cost relationship. With radio, for example, let us say that you can reach 4 million people, and with television you reach 500 000 people. The cost per person would now look something like this: a radio transmission to 4 million people costing 1 000 000 units of local currency=0·25 units per person; a television transmission to 500 000 people costing 2 000 000 units of local currency=4 units per person.

You can see that the costs can be expressed in two forms: total cost of installation and operation, and cost per person reached. In the example given above, the total cost of television is only twice that of radio, but television costs sixteen times more than radio on a cost per person basis.

Radio in context

We should clarify one important point regarding the use of radio as a means of communicating information and education to non-literate listeners. Radio is not the 'perfect' means of communication. Indeed there is no single means of communication or method of teaching that is totally satisfactory in every respect. Radio has some very positive characteristics to recommend its use in a programme of literacy teaching, but from the experience of many countries throughout the world, it is clearly best used in combination with other media of communication, and with a strong supporting component of field workers who can engage the listeners in that most important mode of communication, person to person.

Finally, I do not wish to give the impression that radio is without disadvantages. It is, as you well know from having listened to it yourself many times, a medium that cannot be stopped for clarification. This is where you as a field worker can render one of your most important contributions in working with radio listeners. There will be times when a speaker on radio presents his information or a lesson too quickly, or in too complicated a manner, and the listener is not able to keep up with the lesson. What you can do precisely to supplement and clarify the

work of the radio programmes will be dealt with later in this book. In the meantime, it should be kept in mind that this disadvantage of radio can be reduced considerably with careful explanation and pre-planning.

In the next chapter we will discuss how you can be of great service to your literacy programme by helping programme planners and administrators make a more exact analysis of the listening and learning characteristics of the audience that you will both be working with.

CHAPTER TWO

Analysing your audience: who is listening?

You already know, from the experiences you have had in working with non-literates, something about their basic needs, their attitudes, the ways in which they succeed in learning and the ways in which they fail. One of the difficulties with radio programming on a large scale is that broadcasters tend to make assumptions about the likes and dislikes, the learning capacities, the level of knowledge, and many other features of the non-literate listeners. Frequently, these assumptions are based on inadequate evidence and, even more frequently, the available information is out of date.

The field worker can play a significant and important role in analysing the characteristics of the audience, especially in the early stages of programme development. You are confronting the reality of the non-literate learner at individual and small-group level, and your observations and impressions will be exceptionally valuable in the areas described in the following sections. This is something the field worker can do for those engaged in the production of radio broadcasts. However, this information is extremely useful for his own work as well.

Basic needs

In practically every society you could establish a list of basic needs that are common to all men everywhere. Among other needs would be those for food, clothing, housing, health and welfare services, means of community organization, religious needs, recreational needs, transport and communication, and above all, the need to become an active subject and not simply an object in the on-going processes of social development.

As a field worker in a literacy programme using radio as the primary means of mass communication, you can clarify the basic needs of the audience you are working with, so that literacy materials can be developed which relate to the specific and most urgent needs of the learners. For

people to participate actively and fully in their own learning they must know the value of their own dignity; they must possess a certain minimum knowledge about their rights and obligations; they must receive a minimum training in order to function efficiently in their work; and they must progress intellectually beyond the level of strictly biological needs. For instance, if people are suffering from malnutrition as a result of uninformed or mistaken dietary practices, some part of the learning materials can be prepared which will relate directly to basic themes in health and nutrition.

If the learners are primarily engaged in agriculture, you must evaluate their specific needs in order to know which words, phrases and sentences would be most appropriate to motivate people to acquire initial reading and writing skills.

Level of vocabulary and level of concept understanding

If you have some experience of working with non-literate learners, you will have a fairly good idea of the ways in which they express themselves with words, gestures and bodily attitudes. They have established patterns in constructing their thoughts, and ways in which they acquire new information. As you will have observed, there is considerable difference between spoken and written language; non-literate people have been completely dependent on spoken language which has its own patterns and conventions of use and, in their attempts to become literate, they must learn to adapt to the rules, patterns and conventions of the written language. This aspect of audience analysis is particularly challenging because language is constantly changing; new words come into the language, old words take on different meanings and, frequently, the process of communication breaks down as a result of a mis-match in language and meaning between the producer of the programme and the listener.

Another, and more obvious, reason for lack of communication between producer and listener is given by Ignacy Waniewicz in his book *Broadcasting for adult education:*

> In many countries and regions, problems of language may considerably complicate matters. Many areas are inhabited by ethnically heterogeneous populations, speaking in different languages and dialects. It sometimes happens that, because of tribal rivalries, people speaking a language which is not the main language in a given area are not permitted to use it. In many cases vehicular languages exist which are understood by different ethnic groups. One should be aware that

differences in dialects may cause considerable misunderstanding. As much care as possible should be taken to make the audience feel at ease in following the broadcasts. It may be necessary to broadcast the same topic in several language versions.

As a field worker in a limited geographic area, you will probably be working with only one language group, so the problem of multiple languages does not immediately affect your work; however, it is important as a matter of programming policy to the people in the project who are going to have to allot time, personnel and resources to all of the various language groups.

Therefore, one function of the field worker who is using radio as an integral part of a literacy project is to be on the lookout for instances where the radio broadcaster has either over-estimated or under-estimated the learning capacity of the audience. From time to time you should write to a regional or central office, which is concerned with the preparation of radio broadcasts, informing them that the language used in the broadcast programmes is appropriate or inappropriate, difficult, obscure, not specific enough, at too low a level, or whatever your analysis of language patterns shows.

Your input in this area is extremely valuable in structuring effective broadcasts, and you should try to provide specific information very early in the development of the instruction, so that the producers of the radio programmes can be reasonably certain that they will be reaching audiences of non-literate learners in a language that is clear, comprehensible and interesting to the listeners. Such input or feedback does not have to be given only when asked. Even when producers do not ask for such information, they find it extremely difficult to neglect what is being said even in one solitary letter.

The same suggestion can be made with regard to the levels of concept understanding. Health, for instance, is more than a series of facts about diet, child care, first aid and so on. It is a way of conducting your life. It is a concept which must be learned through many different levels, starting with appropriate vocabulary to express rudimentary ideas and continuing on up to rather sophisticated notions about human behaviour. The broadcast programmers must know how the non-literate listeners acquire certain concepts and your observations in this sphere of learning can be very helpful. Do the people you are working with learn best by many varied examples? Do they require detailed explanation of very simple materials before proceeding to the more difficult, or do they grasp principles quickly?

It is of the utmost importance that you observe carefully how the non-literate people you are working with respond to various kinds of concept learning. On the basis of these observations, you should be able to make valuable recommendations to the people who are producing the programmes that will enable them to achieve desired learning objectives more efficiently, with less wasted effort and in a shorter period of time.

Attitudes

A very important factor in any programme of instruction for non-literates is how the learners feel—about themselves as learners, their teachers, the materials used and the goals they are working toward. For now, let us limit our consideration to how the learners feel about learning from radio. Much of this feeling will be determined by the nature of their previous experience as radio listeners. If they are listening to radio for the first time as participants in a structured learning programme, you might have to explain, without going into excessive detail, about sound-wave transmission characteristics, how radio is able to carry the human voice, music and sound effects over considerable distances. The learners must understand, too, that the radio professors, or speakers, although not physically present, are still concerned about contributing to the learning experiences of the students. Sometimes inexperienced listeners do not completely trust radio as a means of conveying information and education. It is not tangible or visible and, to people who have always relied to a great extent on non-verbal patterns of communication, there are no gestures, facial expressions or bodily postures by which they can judge the credibility or sincerity of the speaker.

You must try to convince the listeners that radio broadcasting as an integral part of a structured educational programme is a legitimate and positive influence. You may have to spend a great deal of time in establishing a feeling of trust and confidence in radio broadcasting but, without it, it is unlikely that radio broadcasting will ever realize its full potential as a learning instrument.

In other situations, you may be more concerned with people who are already familiar with radio as a means of information and entertainment. In dealing with these listeners the problem of acceptance or credibility differs slightly. They may have established radio as an entertainment device, used to bring music or sports events into the home, but they have rarely used it as an educational device. You might have to convince them

that radio is a versatile medium, and that there is room in the broadcast day for information and education as well as entertainment.

In other words, the listener who participates in a programme of structured learning in literacy must perceive radio as a device which can be taken seriously. Although it might have its primary identity as a pleasant means of passing leisure time, it can also be used to accomplish other purposes.

Programme preferences and listening habits

When you have started to work with a particular group of learners, you will discover that they soon develop very pronounced preferences for programme formats, styles of presentation and methods of information delivery. They may become easily absorbed in the dramatic format, they may become emotionally involved with some characters and not others, or they may miss important points by concentrating too hard on incidental information. It is important for the planners to know early in the development of the literacy project which types of programme are likely to be well received and which are not.

Another important aspect of programme preference is the pattern of work and leisure-time habits predominant among certain groups of listeners. It is important to the broadcaster to know, for instance, what time men and women start their daily work, what times they return to their homes, how they use their leisure time on weekends and holidays. Many excellent programmes have gone unheard in many countries because of a misunderstanding regarding the schedules of the intended audiences. For example, if you are interested in reaching all members of a family, your broadcast times are really quite limited. You can expect to reach all members of a family only very early in the morning or in the early evening hours.

In summary, one of your principal functions as a field worker in a radio-based literacy project is to provide constant, on-going feedback and evaluation to the programme producers throughout the length of the project. What exactly is involved in contributing this feedback will be discussed later in the book, but for now let us note that it is especially important to provide this kind of information early in the project, so that productive patterns of programming can be established quickly and non-productive patterns can be eliminated or substantially reduced.

CHAPTER THREE

Programme planning: clarifying objectives

It is difficult to write in general terms about planning radio programmes for the teaching of literacy, because the needs of the audience and the objectives of the project will vary considerably from country to country. Each literacy project and each series of radio programmes will have its own distinct characteristics which make it different from other radio-based literacy projects.

There are, however, some general observations about radio programming that you might find useful in your work with non-literate learners. In the next three chapters I will try to show that the field worker is a very important collaborator in the planning and production of the radio programmes. This does not necessarily mean that you will participate in the actual writing and production of every programme. It does mean, however, that your ideas, observations and comments about the programmes are important to the people who produce them and you may occasionally take an active part in their production. Therefore, you as a collaborator should know something about the elements of radio planning and production.

Usually, in any literacy project using radio, the programmes are developed and produced by a planning team which includes a content or curriculum specialist, a specialist in pedagogy or teaching methods, and experts in radio programming and production. The planning team will start out by clarifying the objectives of the project in fairly general terms. We tend to assume, for example, that the objective of any national literacy project is to make everyone in the country literate. Unfortunately, human and financial resources in any country are limited and such a comprehensive goal as 'making everyone literate' is often unrealistic. It may be necessary to limit a project to only one geographic area of the country and expand the services as resources permit. Alternatively, programme planners might aim at a certain age group and try to reach other non-literates at a later time. I am not suggesting here that limitations must be

placed on literacy projects as a matter of policy. I am, however, suggesting that the objectives of the project must be clear and realistic in order that they can be achieved.

Once the scope of the project has been decided, the planning team must further refine and clarify the learning objectives. They must decide how literacy is to be integrated into a programme of basic adult education, and how reading and writing skills can best be related to the development of skills and attitudes in health, nutrition, agricultural production and other areas of immediate and practical interest to the non-literate learner. Also, they must decide upon a realistic division of labour between the radio programmes and the printed matter that will be distributed to learner groups.

Acción Cultural Popular (ACPO) in Colombia, for example, uses an approach to the teaching of literacy which they describe as fundamental, integral education. This organization, also known throughout the world as Radio Sutatenza, is a private institution devoted to the non-formal education of rural families in Colombia. For more than twenty-seven years they have been providing basic education, motivation and culture to their rural audience through radio, newspapers, paper-bound textbooks, records and extension courses.

ACPO has synthesized man's biological and social needs into five basic concepts: health and nutrition; mathematics; spirituality; economy and work; and literacy. The educational programme of this institution is 'fundamental' in the sense that it is not technical education, nor is it traditional academic education. It is, rather, an education in fundamental notions which serve as the base for man to assume his role as promoter of development—conscientiously, freely and responsibly. It is referred to as integral because the individual must conduct himself as an integral member of his society, by knowing and observing his family, religious, political and community obligations. Finally, for ACPO, education in its broadest sense must allow man to realize his capacities and potentials. It must be a vital process that operates in all the activities of human life. It does not terminate with the obtaining of a title or degree, nor is it limited to certain ages such as children and teenagers. Education in this context is continuing, or lifelong, occurring as a means of support and reinforcement for the person who continues to progress and develop as a human being.

In this context of fundamental, integral education, literacy is approached as a means of two-way communication. By learning to read and write, man can receive the ideas contained in books, magazines and other written publications, but, more important, he learns to communicate his thoughts

in the most effective way possible and to enter into a more profound interaction with other human beings.

Although each of the five major themes is developed into its own paper-bound textbook, and each theme is given its own allotment of time in the programming of the radio courses, the themes are integrated into a single programmatic approach, each theme complementing the others, each mutually related.

Many other institutions treat literacy as an important and integral part of a fundamental education, and in each case the teaching methodology would be slightly different. The real purpose of this example from ACPO is to show you why it is important that the project be carefully and precisely defined with regard to its general objectives. It must be clear to everyone who is going to be working with the project that literacy will be approached as a part of a fundamental education which is oriented toward the immediate solution of practical problems. If this objective is not clearly defined, much time and human energy will be wasted or seriously mis-directed.

Specific objectives

Now that the general direction of the project has been established, the next stage of planning is to select some specific learning objectives that you hope to accomplish. At this point the planning team should be asking questions like these: 'What level of literacy do we think we can reasonably achieve in six months, a year, two years?'; 'What are some of the specific things in nutrition, agriculture, economy and work that these listeners in this project should know?'; 'What is the most productive sequence of learning experiences?'; 'In addition to acquiring knowledge, and forming attitudes, what should these learners be able to do as a result of their increased learning?'

Perhaps now it would be helpful to illustrate what an actual series of radio programmes might look like in this early planning stage. Let us assume that this literacy project is starting out at the beginners level. We can also assume that these programmes for beginners will be broadcast three times a week, each programme lasting thirty minutes. This schedule is purely arbitrary, of course, since one could just as easily be thinking about one programme of one hour every day. In general, one would start out by introducing some basic sounds, basic symbols, words and word groups, simple phrases, simple sentences and, of course, a lot of practical

exercises in reading and writing. In addition to beginning literacy, there will be some information in each programme about basic arithmetic, nutrition, agriculture, or a combination of any of these.

To clarify what I am describing here, let us approach this stage of programme planning in the manner of the team of the content specialist, pedagogy specialist and expert in programming and production. Putting their planning thoughts down on paper might result in something like this:

First week:

First programme: A general orientation for the new learner. Learners must be told what to expect from the radio programmes; why it is important that they learn to read and write. Clarifying schedule of programmes, what materials will be needed. Literacy is related to another important theme: that learning of any kind enhances human dignity.

Second programme: The student is introduced to the concept that his language has certain sounds, combinations or families of sounds, and visual symbols with which he can represent these sounds. The student must grasp the 'idea of literacy' in order to proceed with specific learning techniques.

Third programme: The student is introduced to one or two basic sounds and one or two basic words which employ those sounds. If, for example, you are introducing the open 'a' vowel sound in Spanish, you would probably use words like *mama* and *ama* as examples. Sentences with the word *mama* are used to introduce one or two basic ideas in family development: 'The mother (*mama*) loves (*ama*) her husband and children.' In Hindi or Kiswahili the sounds would, of course, be different and you would naturally use different kinds of sentences.

Second week:

First programme: The student must understand that not only can he recognize and interpret the written symbols he has been studying, but, with patience and practice, he will be able to make lines, circles and the other graphic representations which will eventually enable him to communicate his ideas to others. Guidelines and specific instructions for making the correct letters or symbols, e.g. after class the student will practise the straight line and the slanted line, making thirty of each.

Second programme: The student learns one or two more basic sounds and their symbols, and a few more basic words that include those sounds. Repetition and reinforcement of material learned in the previous week. One of the basic words introduced in this lesson might be the word 'milk'. From the word 'milk' one can move to the concept of 'milk' as a valuable part of the diet, especially for children. Several sentences using the word 'milk' are introduced.

Third programme: More work on sound combinations. Same sound in different positions within certain words. Learners are urged to think of their own examples and, with the help of the field worker or auxiliary, to send in some examples to be read on next week's programmes. Review of what has been learned in these first two weeks. Preview of what will be taken up in the next two weeks.

The same kind of treatment or outline should be prepared for the entire series of programmes before any script writing or production takes place. A great deal of work goes into this stage of planning, but it is well worth the effort in the long run. It enables you to see, with reasonable accuracy, whether or not you are actually doing what you intended to do. It shows where certain themes are being dealt with, with what emphasis, and it may also show that certain themes are not being dealt with satisfactorily. It should clarify problems of sequence among programmes and, if done in sufficient detail, it should clarify the sequence of learning experiences within each individual programme. In each programme, key sentences and key words must be identified and emphasized.

If your literacy project is at a more advanced level, these same techniques could be applied when planning programmes. When using radio for more advanced literacy instruction, the problem, as you already know, is that the newly formed reader needs continuous stimulation and motivation to improve his reading and writing skills. He must understand why it is to his advantage to keep learning, and he needs materials that will constantly challenge and interest him. Obviously, much of this challenge will have to be met by supplying the learners with adequate reading material, and we will consider how this can be done in a later chapter. For now let us look at the contribution that radio can make to the learner who is trying to maintain and improve his newly acquired skills in literacy. A few programme outlines or treatments at the more advanced level might look something like this:

First week:

First programme: The student is reminded that literacy is a means of acquiring practical knowledge, the experiences of other people, useful techniques, as well as his cultural heritage. Through reading and writing a person will be able to share his thoughts, experiences and problems with others. He can communicate *his* ideas about the raising of cattle, caring for crops, and improving his family's nutrition. A person who reads and writes has more confidence in his own abilities.

Second programme: Review of some fundamental principles of literacy that have already been acquired. Sounds and symbols, letters of the alphabet, the meaning of vowels and consonants, forming new words with familiar sound relatives. Dividing words into syllables.

Third programme: General principles of correct spelling. Why it is important to spell correctly. General principles of correct pronunciation. Why it is important to pronounce words correctly. Use of the dictionary; how to look up words; what the dictionary tells us and what the dictionary does not tell us.

Second week:

First programme: Writing good sentences. The different types of sentences according to intended purpose. Suggestions for greater comprehension in reading. Relating literacy skills to other needed instruction—for example, composing a letter to an agency asking for some specific advice on an agricultural problem that has been encountered.

Second programme: Introduction to gender, number, parts of speech, and how this information will help the learner to communicate more effectively. Emphasis on the relationship between human communication and a higher level of social development in the community.

Third programme: Ways to increase vocabulary—practical exercises designed to give the new learner specific suggestions for increasing his communication skills.

As you can see, whether the programmes are to be used at the beginners level or at a more advanced level of literacy instruction, the initial planning procedures are essentially the same. The general objectives of the programmes are determined, the content is chosen and the sequence of

learning experiences is established. The planning team then amplifies these treatments by setting very specific objectives for each individual programme, choosing appropriate formats and deciding upon the production techniques to be used. Before moving to the next stage in the development of the radio programmes, perhaps we should consider at this point whether it would be wise to produce original programming or make use of existing material.

If the literacy project in your country is the first attempt to use radio, it will probably be necessary to produce original programming. If, however, there have been projects in other regions of the country where radio was used as an integral part of the project, some or even all of this material might be suitable for use in another project, provided, of course, that the language, the learning goals and the audience characteristics are similar.

The advantage of using existing material is that it saves a great deal of time and money. Programmes may already exist on recording tape or transcriptions, and they could be scheduled on a regular basis as part of the new project. In many cases, you would benefit from the research and evaluation that has already been done with regard to programme effectiveness.

The disadvantage of using existing material is that it may have been designed with a very specific audience in mind, and it might be unsuitable for listeners you intend to reach. You may feel that the approach used is too limited in scope and that the programmes do not form the nucleus of an integrated approach to fundamental adult education. Furthermore, they may not have been carefully evaluated and there could be serious doubt with regard to their effectiveness as learning devices.

Some organizations have resolved this question by adapting or modifying material that was useful to them and refusing material which was completely unsuitable. This position seems reasonable in that it offers you potential savings in time and money, yet guarantees identity and flexibility in developing your own programmes.

In the following chapter, we will deal with the next stage of programme planning, which is selecting an appropriate style or format to guarantee effective communication and learning.

CHAPTER FOUR

Programme development

There are many ways to plan and produce radio programmes. In this chapter we will consider a few of the basic formats or styles. The most important point to consider at this stage of planning is how to promote the maximum learning achievement. Although this sounds perfectly obvious, planners sometimes lose sight of this fundamental goal. Programmes must, of course, be interesting, well written and skilfully produced, but unless people are *learning*, it does not matter how entertaining or attractive the programmes are.

The talk, or radio lesson

This is a simple, straightforward style, usually presented by someone trained in both teaching methods and the techniques of microphone performance. It is often referred to as a radio lesson or a radio class. In many ways, the characteristics of good radio teaching are the characteristics of good teaching in general, with the exception that the radio teacher must show concern, understanding and support for the learner by means of the voice only. Therefore, teaching or speaking on radio requires the radio speaker to have what is called 'presence'—a sense of being there with the listener, talking directly to him.

The advantage of this format is that it is fairly easy to produce, requires relatively little rehearsal and production time, and presents a great deal of information in a short period. However, radio producers sometimes forget that their listeners are totally dependent on the spoken word. Unlike newspapers, magazines or reading material in general, the learner cannot stop, go back or think about the material. He must keep up with the lesson as well as he can. If the producer has tried to squeeze too much material into a single transmission, the listener can easily become frustrated.

In case you are wondering 'what does all this have to do with my role as a field worker?', you can be assured that the feedback you provide to the programme producers is especially important in producing the radio talk or radio lesson. After you have listened to a few programmes with your particular group of learners, you will know where they are having difficulty. If they cannot keep up with the lesson, you must inform the producers that the programme needs to proceed more slowly, or more examples are needed, or more time should be allowed for repetition and clarification. Or the opposite may be true—the lesson is moving too slowly and the listeners are bored or restless. In either case, the producers should be given some idea of how the lessons are being received in order to make whatever adjustments are necessary in the development of the following programmes. We will go into this matter of feedback later on in the book, but for now you should be aware that producers depend upon your input into the programme production process. Your ideas should be forwarded early in the course, as well as at frequent intervals throughout the duration of the project.

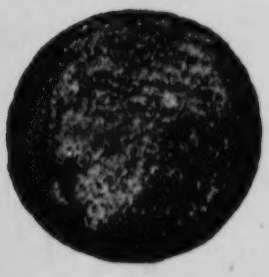
Radio talks in the early stages of literacy learning would most likely stress basic letter formation skills. Instead of just talking about making letters, the speaker should try to get the learners actively involved as participants. The learners will probably have simple text/workbooks, in

FIGURE 2. *The five basic vowels in Spanish*

which each vowel and each consonant is illustrated by a simple word, a simple drawing, and enough space for practice. For instance, Acción Cultural Popular of Colombia uses illustrations for the five basic vowels in Spanish as in Figure 2.

The drawings need not be sophisticated or professionally executed, but they are important cues that the learners need in acquiring new literacy skills. The visual aspect makes the learning task more concrete. For example, to practice the 'O' in English, all you need is something like Figure 3.

FIGURE 3. *The vowel 'O'*



ORANGE

OOOOOOOOO

Let us assume now that each learner has in front of him a text/workbook, or a worksheet that you have made. The radio professor says:

PROFESSOR: Everybody on the same page now? You should be looking at that nice juicy orange at the top of the page. Under the orange there are six letters that spell the word orange. Let's practise making the first of those letters—It's the letter we call 'O'. It's a round letter, just like the orange, and it's a very easy letter for you to make. Why don't you try it at the bottom of the page? There's a row of 'Os' there, so underneath, you make some of your own 'Os' just about the same size as the letters in the top row. Now you make some 'Os' and I'll be back in a couple of minutes.

(*Musical interlude for about two minutes while students are making letters on the worksheet*)

PROFESSOR: See how easy it is to make 'Os'? After this broadcast you should practice making more 'Os' until you feel confident that you can make them without even having to think about it. As soon as you have mastered the 'O' we'll take up another easy letter, the 'I'. . . .

Even from this brief excerpt you can see some of the characteristics of the radio talk. It's very much like a lecture or lesson that would be given in a classroom. If the person giving the talk has an interesting and enthusiastic personality, the radio talk can be quite useful as a learning device. If the

speaker is dull, lacks energy or has a speaking voice of poor quality, a lesson of fifteen or twenty minutes can be quite tiring. Moreover, you must imagine this script being read aloud. Here on the printed page there is no problem in going back a line to clarify a point, but you must remember that the listener is totally dependent on the words that he hears; moreover he cannot go back to check a previous sentence.

A good radio talk or lesson must be exceedingly clear; there must be a lot of repetition and internal summary; and the tone and inflection of the speaker's voice must do the work that punctuation does in the written form of the language. Many radio speakers find that their listeners appreciate a brief pause now and then during the programme, hence it is not uncommon for a script to contain brief pauses or musical interludes every five or six minutes.

The dialogue

The dialogue is a form of presentation in which two speakers, instead of one, present the information. The dialogue offers the listener greater variety than the single speaker; therefore, it has considerable merit as a means of stimulating and maintaining interest in the radio lesson.

In the dialogue that follows between Professor Kim and Professor Lee, the information could just as easily be presented by one person, but the addition of a second voice and personality sometimes makes the programme more interesting and, thus, more appealing to the listener.

PROF. KIM: Professor Lee and I have been reading some of the letters that you have sent in for use on our programme, and we thought that all of our listeners would like to know what some of your fellow learners have to say. Professor Lee, why don't you read us a part of the first letter?

PROF. LEE: I would be very happy to read a few lines of this letter from Mr. Soon who lives outside of Pusan. He says, 'I have been practising my reading by studying the leaflets which are distributed by the agricultural extension service in my area. Since the leaflets have a lot of drawings, it is easier for me to understand the directions in the leaflets than the directions that are sometimes printed in my weekly newspaper.'

PROF. KIM: Our thanks to Mr. Soon for his letter about keeping up on his reading by using the leaflets of the agricultural extension service. As Mr. Soon says, it is a very practical kind of

reading, and the drawings help out sometimes when we do not understand all of the words. Maybe in one of our next month's classes, we can practise a few words that are commonly used in writing these leaflets. Professor Lee, do you have another letter for us? . . .

It is not necessary for both participants in the shared dialogue to be professional educators. A teacher in a radio studio with a small group of students can be just as effective in dialogue as two teachers, or a teacher and a professional broadcaster.

The interview

Occasionally, radio producers have a limited idea of the usefulness of the interview. They tend to invite well known 'experts' or 'specialists' in certain areas to participate in the radio programmes, but they often forget that many listeners who are not 'experts' have valuable ideas which should be shared with others.

The literacy field worker can contribute to the development of this type of radio programming: by identifying people who might make good guests on a programme; by suggesting some themes for conversation; and often by actually helping to record interviews in the field, assuming that portable recording equipment is made available.

A short interview with a farmer who has encountered and solved a problem, or an interview with a field worker who has good ideas about helping people learn new skills, can be very useful and interesting as part of the regular series of programmes devoted to the teaching of literacy.

In the sample interview that follows, Professor Kolawe is asking Jimo Olike, a volunteer worker in the literacy project, to share his ideas about making simple but effective learning materials for use in village literacy classes:

PROF. KOLAWE: Today my guest on the programme is Mr. Jimo Olike. Mr. Olike is a volunteer worker from the Benin province who has been helping learners in our project for the past two years. Welcome to our programme, Jimo.

JIMO: Thank you Professor Kolawe.

PROF. K.: Jimo, I understand that you and some of the students in your village have made your own card games that you use in your literacy classes. Would you like to tell our listeners how to play one of the games so that they might use it in their classes?

JIMO: I'd be glad to, Professor. For one of the games, we made two sets of cards—forty cards in each set. We used some thin cardboard and crayons to make our cards, but any kind of paper would do just as well—scrap paper, notebook paper—and you really don't need crayon—a pencil or pen would do just as well. One set is made up of picture cards—drawings of everyday objects that people are familiar with. One card is a picture of a plate, another card is a picture of a cooking pot, another card is a picture of a broom, and so on—all familiar objects to our listeners.

In the other set of cards there is only the printed name of each object. For instance, on one card is the word 'plate', on another card the word 'broom', and so on.

PROF. K.: So you have eighty cards in total. Forty of them are picture cards that have drawings of common objects, and forty of them are word cards, where only the name of the object appears on the card.

JIMO: That's right. To play this game you need forty picture cards and forty word cards.

PROF. K.: Now, Jimo, please tell us how the game is played.

JIMO: Any number of people can play, but it's most fun if there are four or five players. You deal out all of the picture cards to the players, so if you have four players, for instance, each player would hold ten picture cards in his hand.

PROF. K.: What do you do with the word cards?

JIMO: You place them in the middle of the group, face down. The first player draws a word card, and if it matches one of the picture cards he is holding, he puts the two cards down in front of him. If the word card doesn't match one of his picture cards, he puts it back into the pile of word cards.

PROF. K.: So the object of the game is to match word cards correctly with picture cards. Now, tell us Jimo, how does a person win the game?

JIMO: The object of the game is to match up all your cards, so the first person to play all of his picture cards will be the winner. People enjoy playing the game, Professor Kolawe, and at the same time they are getting a lot of

practice associating words with objects. When everybody has learned the forty words we are using now, we will make forty new picture cards, and forty new word cards.

PROF. K.: Jimo, that's a game that sounds like a lot of fun, and as you say, a valuable way to practise learning new words.

We hope that you will come back to our programme soon to tell our listeners about another learning game that you and your students have been using in your literacy classes.

JIMO: Thank you Professor, I would be very happy to do that.

In a good interview, the professor or 'host' of the programme acts on behalf of all the listeners by inviting a guest to share his knowledge or experience with them. The host asks the questions that the listeners would ask if they had the opportunity of talking to the guest. In this interview between Professor Kolawe and Jimo Olike, notice how the professor helped to structure the interview for the listener: how are the cards made? how is the game played? how does a player win the game? The professor asked the questions not only to clarify, but also as a means of repeating the information. He was acting on behalf of the radio listener in order to make the information clear and useful.

The interview method is not as satisfactory as the radio talk or lesson for delivering large amounts of basic information. Nor is it a good format for encouraging repetition or drill work and practice. It is most appropriate as a means of stimulating interest in a particular learning problem. Besides, it can be very useful in providing learners with a practical application of a concept or principle.

For example, after the programme which features Jimo and Professor Kolawe, you hope that listeners in other parts of the region or country are motivated to do similar things. You hope that they are saying 'Jimo had some good ideas—we should start making games and other learning materials for literacy classes in *our* community.'

The discussion

The discussion is a relatively simple format which is closely related to the interview. A discussion group usually consists of one person, who acts as moderator or leader of the discussion, and three or four participants or guests. The people who participate in the discussion may be experts on

some particular subject, or simply a group of learners with a common interest as their topic.

As in the interview, the field worker can help to identify themes which are of interest to the listening audience, and he can often suggest that specific individuals in his community be invited to participate in a radio discussion. An excerpt from a discussion programme might read as follows:

PROF. AZIZ: Last week, in our review of some new words, we introduced the words 'responsible' and 'responsibility'. Today, I have with me in the studio three students, who are enrolled in the second level of our literacy project, to discuss the different ideas they have about the meaning of 'responsible' and 'responsibility'. Ali, what do you think these words mean?

ALI: If I am responsible for something, I must take care of it, or look after it. I care for the fruit trees in my father's garden, so I am 'responsible' for those trees.

OZRA: I think it means that you are to blame for something—if something bad happens, it is your fault. My mother is always asking in our house, 'Who is responsible for this mess in the kitchen?' If I made the mess, I am 'responsible for it—it's my fault.

AHMED: Neither Ozra nor Ali has come very close to what I think responsibility means. It's more than just looking after some fruit trees, and it certainly means more than taking the blame for a messy kitchen! When we say that a person is responsible, it means that he can be trusted to behave in a correct manner, in any situation.

PROF. A.: Well, it seems that you all have different ideas about what it means to be responsible. Maybe we should try to define some of the other words we have been using to talk about responsibility. . . . Ahmed, you said a responsible person behaves in a correct manner. What do you mean by a correct manner?

AHMED: It means that a person obeys the laws, he respects the rights of other people, he tries to . . . .

Audiences enjoy the radio discussion, because it is often quite lively and spirited. Listeners come to realize that other people have some of the same difficulties they have, and they can easily identify with one or more of the participants in the discussion. Like the interview, the discussion format is not ordinarily an efficient means of conveying factual information, or of

developing concepts and organizing principles. It is, however, a good device for introducing students to the idea that it is possible to have a variety of opinions on the same subject, and that discussions and arguments can be built on facts and their interpretation. The discussion format is also useful in showing students in the radio listening groups that free and open discussion can lead to new solutions to some of their problems.

The dramatization

The radio play has been a popular format for many years, either as an entire programme or as a segment within a programme. It is popular because it contains all the elements that appeal to most people—a good story, well-developed characters, interesting dialogue, and sound effects and music to enhance the performance. Although a good scriptwriter, supported by a capable company of actors and technicians can produce a radio play that will capture the imagination of an audience, it requires a great deal of production time and, obviously, a great deal of talent. Furthermore, there is some question about the effectiveness of the dramatic format in a basic literacy programme. Where you are teaching the fundamental principles of reading and writing, it might be better to devote the programme time to the simpler styles of the direct talk or radio lesson.

On the other hand, in a more advanced literacy context, the dramatic format could be quite powerful as a means of stimulating discussion as you will see from the following script:

The scene is the living room of Antonio and Maria Ramos. Antonio has just returned from work. The first sound we hear is that of a door being slammed.

MARIA: Is that you, Antonio?

ANTONIO: (*very loudly*) Who else would it be? You're always asking 'is that you, Antonio?'

MARIA: What's the matter? Why are you so angry? I only meant to welcome you home—did something happen at work?

ANTONIO: No, nothing happened at work. Nothing happened . . . I don't want to talk about it.

MARIA: O.K. Would you like some coffee, or a coke, or do you just want to rest?

ANTONIO: I uh, I'm sorry. I didn't mean to scream at you. It's just that (*then very loudly*) that Fernando—he's a thief—he's no better than the man who steals your money in the street!

MARIA: Wait a minute! Calm down! Fernando's your friend—didn't you borrow money from him when we needed it six months ago?

ANTONIO: Yes, and you remember that paper we signed? 'Just to make it business-like,' he said, 'that's all.' Today he says that I owe him an extra fifty pesos for 'interest'—'look at the paper we signed,' he says, 'it's all there.'

MARIA: But Fernando wouldn't cheat you. You've been friends for a long time. Why don't you take the paper to Mr. Martinez at the community development office? He's always helped you before.

ANTONIO: All right, that's what I'll do. Mr. Martinez is honest, and he has experience with such things . . . I'll be back as soon as I can.

(*Antonio leaves*)

SCENE TWO: *The community development office of Mr. Martinez.*

MARTINEZ: Antonio, come in, what a pleasure to see you! How have you been? How's Maria? How are the children?

ANTONIO: Oh, we're all right Mr. Martinez. Everybody's well. I have a better job than I had . . .

MARTINEZ: I'm glad to hear that. Is there anything special I can do for you?

ANTONIO: I have a small problem Mr. Martinez.

MARTINEZ: What is it Antonio? Maybe I can help.

ANTONIO: Well, about six months ago, when Maria was sick, I needed money to pay the doctor, and buy medicine. I bought the medicine at Fernando's store, and I told him that I couldn't pay for it right then, but I would pay him as soon as I could. He let me have a thousand pesos and I signed a paper that said I would pay it back, a little bit each week. Today, I went to make the last payment, and he said I still owed him another fifty pesos. 'Read the paper,' he said, 'that's what you agreed to when you signed it, Antonio.'

MARTINEZ: Hmm, let's have a look at that paper.

(*He reads aloud*) 'I Antonio Ramos on this fourth day of February, have borrowed one thousand pesos from Fernando Gomez. I promise to repay Fernando Gomez the principal, plus five per cent interest, six months from the date of this loan.'

Well, that seems very business-like, Antonio, and here's your signature. You promised to pay Fernando the thousand pesos, plus fifty pesos interest, for the use of the money.

ANTONIO: But he didn't explain to me what interest was, Mr. Martinez. I don't understand this business of having to pay more than the amount of money I borrowed. That doesn't seem right.

MARTINEZ: Sit down Antonio. Let's see if I can explain to you why a businessman like Fernando would ask you to sign a paper, and why he is entitled to interest, or a payment for the use of his money. . . .

As you can see, the scriptwriter has created a situation in which a conflict is immediately established, characters are interacting, and the audience is drawn into the play right from the beginning. What happens next depends on the specific learning points to be made . . . are you stressing the necessity of reading carefully anything you sign? Are you stressing some aspects of human relationships that needs clarifying? Was Antonio careless, or just confused by the language he encountered in the paper that he signed? What should he have done at the time? What can he do now? What can he do in the future?

One final observation about the dramatic format: programme producers should have a clear idea about the learning purposes of the programmes, but, occasionally, they become so involved in the plot and characters that the learning outcome becomes secondary to the dramatic outcome. The field worker must be constantly aware that the primary function of this or any other type of radio transmission is to instruct the learners. If you see that the listeners are absorbed in the drama but are missing the principal learning point, you must direct the discussion after the programme to specific learning objectives. You might also, in your reports to the production and programming team, mention that the dramas are interesting and good as motivating devices, but the pedagogical points are not being clearly made.

As I mentioned at the beginning of this chapter, there are many ways to write and produce radio programmes. In addition to the simple talk or lesson, the interview, the discussion and the dramatization, there are radio documentaries, newscasts, short spot announcements, programmes of songs and instrumental music, all of which could be adapted and used in making programmes for the teaching of literacy. Having considered a few of the basic formats, perhaps now is the time to say that probably the

most common type is a mixture or combination of styles and formats. What this means is that the planning team establishes specific objectives for a programme and proceeds to develop it in a variety of styles in order to present the learner with the desired information, concepts or attitudes in as clear, interesting and forceful a manner as possible. A programme that employs such a flexible and open approach might look something like this:

1 minute	*Opening music.* *Opening announcements and introduction of Professor A. Kirby.*
4 min.	Today we are going to review some words that begin with the letter 'b'. Do you remember on our last programme we said the 'b' was the first letter in these words: 'baby', 'boy', 'beans' and 'bones'? It's also the first letter in 'bring', 'build', 'become' and 'be'. (*Professor Kirby goes on to give more examples of words with 'b' in the initial and medial position.*) Now, we have a song for you which uses a lot of these words—listen carefully for some of the words we have been talking about.
2 min.	*Song, of four or five verses, which uses many of the words presented above. Easily remembered melody, simple rhyming patterns and a good deal of repetition.*
2 min.	In the song we just heard, there is a line about '*b*abies *b*ecoming *b*igger'. One of the ways in which *b*abies *b*ecome *b*igger is through good nutritional practices. We know that babies and young children need milk, cereals, fruits and vegetables, but can you think of some nourishing foods that begin with today's letter 'b'—We'll have a brief musical interlude now to give you a chance to think of some nourishing foods that begin with the letter 'b'. As you think of the new words, try writing them down in your notebook.
1 minute	*An instrumental interlude to give the students a chance to think of some new words, and to write one or two of the new words in their notebooks.*
4 min.	*Professor Kirby introduces some new words beginning with the letter 'b'. First part of this exercise will concentrate on words like 'barley', 'bread', 'beans', 'bananas', etc.*

As you can see, this radio programme is a combination or mixture of formats and styles—direct instruction through the talk or lesson portion given by Professor Kirby; a song; a musical interlude which affords time for student participation and practice; and, perhaps later in the programme, a reading of a poem sent in by a listener and a brief interview with the author of the poem.

Another example of a radio transmission which is a mixture of formats and styles comes from the Literacy by Radio Project, in Mwanza, United Republic of Tanzania. The present structure of the programme for classes consists of seven major segments, and a closing segment which is designed to link one programme to the following one.

Segments:

1.	*Agriculture* and other work topics (geared to the agriculture cycle)	5'00"
2.	*Home life*	4'00"
3.	*Reading* available on these topics	3'00"
4.	Slogan on summing up topics and used as basis for literacy exercise	2'30"
5.	*Discussion; questions*	2'30"
6.	*Motivational and supporting songs*	4'00"
7.	*Answers* to listening classes questions	4'00"
		25'00"
8.	*Linking script*	5'00"
	Total programme duration:	30'00"

An example: Programme 31: Uzima ni afya (Living is health)

1.	*Agriculture:*	Cattle dipping: Interview: regional veterinary officer Interview: cattle keeper
2.	*Home Life:*	Skin diseases: Interview: home economist
3.	*Book Review:*	Agricultural Pamphlet: 'Dip your cattle'
4.	*Slogan:*	*'Uzima ni afya'—(Living is health)*
5.	*Discussion:*	i) Why should we dip our cattle? ii) What skin diseases trouble you in your area?
6.	*Songs:*	Voluntary choir

Using a combination of styles and formats within the same programme affords you great flexibility in producing broadcast materials for literacy instruction. You can use the first three or four minutes to motivate the listeners, introduce the subject or theme of the day, and briefly review

what was presented in the previous lesson. The major part of the programme, which is devoted to reading, word building, writing and other aspects of a fundamental education, can be dealt with in a variety of ways. The conclusion is usually a review of the major points that were to have been learned from this broadcast.

In summary, there are many different ways to produce radio programmes, and as production teams gain more and more experience, they will discover more imaginative and challenging ways of motivating and teaching the adult learner. As I noted at the beginning of this chapter, programmes must be interesting, well written, and skilfully produced, but, above all, the listeners must be learning. If the listeners are not learning from the programmes, it doesn't matter how entertaining or attractive they are.

When members of the programme planning team, together with the specialist in radio programming and production, have decided on the formats that are best suited to the learning objectives, they can begin to make plans for the next stage of the project, which is the actual production and distribution of the transmissions and supplementary learning materials.

CHAPTER FIVE

Production and distribution

In the programme planning and development stages, objectives are specified, content is selected and a format chosen that will provide the audience with logical, reasonable and interesting learning experiences. In producing broadcasts one uses microphones, records, cassettes, tape recorders and other equipment either in a studio or on location.

Production facilities

(a) *The use of existing radio facilities*

In many countries there is already an established national radio broadcasting service and in most areas of the world commercial radio has been well developed for many years. In using radio for the teaching of literacy it may be a good idea, especially if the project is just getting started, to contract with an experienced radio station for the use of their studio facilities, and often their transmitting facilities as well.

There may be some advantage in not having to build broadcasting facilities in the early stages of a radio-based literacy project, but eventually you would have to analyse the relative costs of investing in your own facilities as compared to renting commercial facilities over a long period of time. On the one hand, there may be some advantage too in not having to train a large number of studio technicians, but, on the other, organizations that enter into contractual arrangements with commercial radio stations often find that the arrangement is disadvantageous since rehearsal time is limited, there is little opportunity to experiment with new production techniques, and broadcast hours are not always made available at the most desirable time for reaching intended audiences.

(b) *Building your own broadcasting facilities*

Putting up a permanent building, with radio studios, rehearsal rooms,

tape-editing rooms, engineering shops and offices for staff members involves very high costs, since it is a highly specialized type of construction. For instance, studios must be sound-proofed, they must be air conditioned, humidity must be controllable, and the supply of electrical power must be absolutely reliable.

Some organizations have tried to save money by converting an existing building into a radio studio, but, because of the special demands of radio production, this type of conversion almost always results in a compromise between the ideal and the manageable.

As a minimum of equipment, one would need two or three microphones, an audio console which allows you to control sound and music, and two or three tape recorders to permit the capacity to record and store programmes for later use. It is difficult to specify the cost of this minimum component of equipment, but it would probably be in the range $10 000–$50 000, depending on the specific kinds of equipment, the transportation and installation costs, and the nature of service contracts.

In addition to the studio equipment, one would need a transmitter, an antenna and a tower. The cost of transmitting equipment would probably be in the range $40 000–$100 000, depending on the power of the system.

Obviously, initial cost is going to be a major factor in constructing and equipping a radio station, but you must also anticipate the relatively high costs of using, maintaining and repairing equipment.

(c) *Portable recording equipment*

Not only does a permanent studio involve considerable initial cost and continuing costs for maintenance and repair, it often has a stifling effect on the way in which producers look at the nature of radio programming and production. There is a natural temptation to use the building and equipment to justify its high cost. Although it is a perfectly normal tendency to want to make maximum use of the studio, it frequently inhibits producers from going out to farms, factories, small towns and other places beyond the studio environment. Granted, you can bring people to the studio for interviews or discussions, but, if you truly believe that radio has the power to open a window on the world for the learners, you must literally go out into the world and translate it into meaningful learning experiences. A microphone and a compact audio tape recorder powered by batteries can easily be carried by one person, while the quality of reproduction is surprisingly good. Portable recording equipment permits you to go practically anywhere to put on tape those experiences which are of value in any number of learning activities.

Finally, with regard to facilities, there is no reason why radio production cannot take place using a variety of styles and a variety of locations. A new project, for example, might get started by renting facilities from commercial broadcasters, or using a certain amount of time donated by a government owned and operated station, and, later, separate studios could be constructed, designed to suit the specific programming purposes. In addition, a good deal of the production work could continue to be carried out on location, recording the events and the voices of people from the real world—the one inhabited by most of the learners.

Production personnel

Whatever the number of people and the amount of equipment involved, the truly important factor in organizing personnel for programme production is to continue to think of every broadcast as an essential and integral part of the literacy project. The specialists in subject matter and teaching methodology, who have designed the learning experiences for radio, must continue to work together to ensure that their ideas, plans and concepts are faithfully translated into the actual radio programmes and the supplementary materials. The function of the producer-director, the radio professor, interviewers, discussion leaders, actors, studio technicians and all the other supporting personnel is to carry forward the work that has been done by the planning and development team.

The actual number of people to be employed depends on several factors, such as the amount of programming you eventually hope to produce, the availability of well-trained communication specialists in the country, and the availability of production and transmission facilities. Rather than specifying any particular number of people or how they should be organized, it might be more useful to describe certain key positions that exist in educational broadcasting by radio.

(a) *The radio teacher*

We assume that the radio teacher should have had an excellent background in the theory and methodology of teaching fundamental education, including literacy, to an adult audience. In addition to this important professional qualification, the radio teacher must be highly motivated to learn the techniques of communication by radio. He or she should have a pleasing voice, a radio personality which appeals to the listeners and a great deal of enthusiasm and power of persuasion. If the professor has

never had any experience in communicating by radio, he is probably going to need quite a bit of time and practice in learning to write for the ear and mind of the listener. This is, as we have discussed earlier, a very special kind of writing and organizing, and it is unlikely that the average teacher would have learned these techniques as part of his normal teaching.

In addition to preparing and presenting the radio talks or lessons, the teacher is expected quite often to assume the duties of the interviewer or group discussion leader. Here again, these are special techniques and the teacher may require a good bit of time and practice in order to become truly skillful as an interviewer or discussion leader. Although the teacher should participate in the writing and production of the radio drama, it is probably unreasonable to expect a professor to write a radio drama without the collaboration of a skilled scriptwriter who has written extensively for the dramatic format.

Finally, a good radio teacher needs a lot of patience, a good sense of humour and a great deal of confidence. It is difficult, but extremely rewarding work to know that your sphere of influence as a teacher can be extended a hundredfold or even a thousandfold by means of radio.

(b) *The producer-writer-director*

I have combined the functions of the producer, writer and director into one general category, since each broadcasting station has its own conception of what these specialists do. In general, the writer prepares the dramatic scripts, the documentaries, the spot announcements and any special programmes which require extensive skill in creative writing. Usually, the director is the person who takes charge of working with the actors on their interpretation of the script, supervises rehearsals and actually 'directs' the programme from the control room, either in a live broadcast or for a recording. His technical and managerial skills must be very well developed in order to prepare a finished professional product. A producer usually sees to it that budgets are followed, programmes are produced on time, personnel are paid and other administrative matters run smoothly.

In one organization, writers will prepare and direct their own scripts, in another a single individual will be given the title producer-director, and it is not uncommon, especially in smaller organizations, to have a single individual performing all three functions. It really does not matter what you call the personnel involved—what is important is that the functions are assigned to someone, and that they are carried out as professionally and efficiently as possible.

The producer-director-writer is a key member of the production team and he will play an important role in helping the planners to put their ideas and objectives into finished radio programmes. In addition to a good background in writing and production, the producer must be able to work with people of different temperaments and dispositions. Unfortunately, it is not always easy to find qualified people to fill these important jobs. Some countries have sent promising young people in theatre arts or journalism abroad for a year or two to a university or a broadcasting organization which offers specialized, intensive training in radio writing, production and direction. Other countries have brought in foreign advisors to train personnel and, occasionally, some organizations have been fortunate enough to find trained people with experience in commercial radio, either in their own or in neighbouring countries. It is for this reason that I suggested the possibility of renting or leasing the production facilities at first, then constructing your own facilities. In this way, people can receive on-the-job training while programmes are being produced, but the entire burden of production does not fall on young and inexperienced people.

(c) *Production staff*

In addition to radio teachers and producer-writer-directors, a radio production organization will require studio technicians, engineers and music specialists, and a few people in supporting services such as bookkeeping, secretarial services and maintenance. A good engineer who has already had considerable experience in electronics before he began working in radio production is almost indispensable to any broadcasting organization. The number of people needed to serve as studio technicians, music specialists and office personnel will depend on the programming requirements you have established and the facilities you plan to use. It is often necessary, especially if you have constructed your own facilities, to have one experienced producer and one experienced engineer offer intensive initial training sessions for newly employed people, followed by a well-organized programme of on-the-job training.

Production schedules

It is difficult to specify exactly how many programmes are to be produced, how many times per week they are to be broadcast, and how much time the production team needs in order to produce them. Some organizations

broadcast one literacy programme per day, some broadcast three times a week, and others broadcast once or twice a week. Nor is there any hard and fast rule about the length of individual programmes. By tradition, in commercial broadcasting, transmissions are fifteen, thirty or sixty minutes in length, but this duration is determined more by convenience than by any pedagogical reason.

The field worker can make a very valuable contribution to the learning process with regard to scheduling. He knows the listening habits of the people he has been working with and he can be very helpful to the producers in suggesting appropriate programme lengths, number to be broadcast per week and ideal broadcast times in order to reach as large an audience as possible.

Naturally, a fresh course with relatively inexperienced personnel and new equipment will need more time for programme planning and production than an experienced team working in familiar surroundings. An inexperienced production team probably should have a month or two to prepare scripts, record music, construct sound-effects devices, go out on location with portable recording equipment and get the feeling for working with the production equipment. In some production organizations, the first few programmes are produced strictly as pilot or sample transmissions. They are played in the studio or in a nearby listening area to an invited audience of students and field workers in order to get their comments, reactions, criticisms and feelings about the programmes. The production team will see their first efforts put to the test and, although it may be painful to them, they will learn a great deal about the effectiveness of their programming from an audience which is giving them immediate and honest feedback. These sample programmes should be heard by the pilot audience about two months before the literacy project gets under way, allowing the production team sufficient time to revise their production techniques, change their approaches in programme design, and improve their methods of script writing, use of music and sound-effects, and integration of all the combined audio elements.

Some radio production organizations feel that they should have a supply of programmes on audio-tape, together with the appropriate supplementary materials, which will cover a period of two to three months. When programmes for the first week of May are being broadcast, for example, the production team is at work in the studio producing the programmes to be heard during the month of July. Such an arrangement would give you what is called a 'lead time' of eight to twelve weeks. Other organizations transmit their programmes live, rather than recorded, and

they have no 'lead time' at all. The broadcast for 1 May is produced and transmitted on 1 May, and the broadcast for 1 June is produced and transmitted on 1 June.

There really is no hard and fast rule whether to produce and transmit live radio programmes or to record them on audio tape for later transmission. If a programme is a relatively simple lecture, given by an experienced radio teacher, one could probably transmit it live. If the programme contains a dramatic segment with music and sound effects, it would be safer to record it on tape. Taping gives the producer the opportunity to work on the programme until it is completely acceptable—technically, aesthetically and pedagogically.

If the radio teachers or narrators are relatively inexperienced, live production can be very threatening to their sense of composure. Recording them on tape gives them a greater sense of security. The tape recording also gives them a chance to hear themselves as the learners hear them, which is a useful device for self-evaluation.

A reasonable compromise between transmitting every programme live and trying to maintain a two- or three-month 'lead time' is a situation in which you are about three or four weeks ahead in your production schedule: the first or second week in February you are producing the broadcasts and materials that will be used during the first week in March. In this way there is a slight margin of security in the event of anything going wrong, such as a radio teacher becoming ill, studio equipment failing or some other problem which would interfere with the progress of the production team. You have enough programmes on audio-tape to get you over a difficult week or two and, if necessary, you can relax the production schedule slightly if a particularly difficult production problem comes up, requiring more than the usual amount of time.

There is a reasonable margin of security, yet you are not so far ahead of the broadcasting schedule that you cannot be responsive to demands for change. If you find out after the first month that the course is not suitable for the intended audience, you can modify it for the second month. If you are three to four months ahead, you are less likely to respond to a need for change, because it is expensive and very time-consuming to completely re-make programmes and supplementary materials. A reasonable balance, then, between preparation time and immediacy of the broadcast is essential in establishing production schedules.

Production values and processes

Although production values and processes vary from country to country, certain general observations can be made.

1. Radio programming and production teams have a tendency, especially at first, to try to accomplish too much. They try to produce too many programmes per week, or per month, and they try to include too much information in each individual broadcast. It is impossible to say just how many programmes per week a relatively inexperienced production team can produce but, as a general rule, if they think they are capable of producing six programmes a week, they should try only four.

   With regard to individual programmes, you have to realize that, for the great majority of listeners, radio is a new mode of learning, which will require some time for them to adapt. If the programme makes six major points, try cutting it down to three or four. This does not mean shortening it, rather simplifying, clarifying, re-explaining, using more vivid examples, so that the students are not overwhelmed by an excessive amount of information in any one broadcast.

2. The dominant factor in radio programming and production must be clarity. If you keep the learner in mind you will dispel a common tendency to over-produce, i.e. to use too many sound effects, too much music, and too much exercise of directorial gymnastics.

3. Organization for production is essential, but the organizational plan should not overwhelm the production team. There are certain patterns or formats, variations within formats, and, no doubt, there are ways of using radio that have not yet been fully exploited. We have always tended to think of radio in terms of programmes, i.e., narrative, linear sequences of events, with a beginning, middle and end, with a pre-determined duration of fifteen, twenty or thirty minutes.

   Radio can, of course, be used in this manner, but there are certainly other possible patterns. Short segments could be used to introduce a problem, a single song could be played at various intervals; a programme sequence could come to an end without any conclusion, leaving the possible resolutions to the listeners.

   Far too often we have been influenced by commercial broadcasting production techniques in determining structure, duration and method

of approach. Radio programming for educational purposes must seek its own identity with regard to purpose, format, duration and style.

The production of supplementary materials

Thus far in this book we have been discussing the design and production of radio programmes, but most countries that have used educational broadcasting on a large scale have found it necessary to produce materials for teachers and students which will supplement the actual broadcasts.

Acción Cultural Popular, for instance, publishes a weekly newspaper which carries important news of the week, didactic materials, articles and special features on hygiene, food, sewing, animal care, construction and conservation of the home and other topics of interest and utility to a rural readership. The paper also carries comic strips, songs, techniques and rules of games and sports, and a page devoted to materials sent in by readers.

They publish paper-bound textbooks, a basic literacy text, and a text for each of the fundamental notions of literacy (advanced level), mathematics, health, economy and work, and spirituality, to give visual support and permanence to the radio teaching. The booklets are prepared by a team of professors who are permanently employed by the institution. In most instances, the professor who writes the textbook also writes, produces and presents the radio programmes. The booklets are a vital and integral part of the radio courses, serving as a means of reference, allowing the student to go back over some of the lessons, amplifying and explaining difficult points. These text booklets are distributed free of charge to the listeners in the radio schools as part of ACPO's service to the rural family.

The institution also publishes a series of books in inexpensive paperback editions which are specially written for rural families. These books form a collection of about twenty-five titles known as the 'Campesino Library'. The books are usually written on themes that have been treated in the programmes on the five basic notions, but they go into much greater depth in this collection on such topics as the raising of dairy cattle, beekeeping, raising of rabbits and other topics of this nature. Listeners to the radio programmes find the books very helpful not only for the practical information they contain, but also as a continuous source of reading material for people who wish to maintain and improve their levels of reading ability.

The most important consideration in the use of these written materials is their co-ordinated and systematic use. The messages contained in the textbooks are reinforced by the radio programmes and vice versa. The weekly newspaper articles are directly related to the radio programming of the week, and the books and records are published in direct support of the campaigns and on-going courses of the institution. The learner who follows the daily broadcasts transmitted by Radio Sutatenza will find in the weekly newspaper, articles, photographs and drawings which are designed to clarify and amplify the themes which have been treated by the professors on radio. Moreover, if a learner has questions or problems regarding the didactic materials of a given week, he can take advantage of ACPO's correspondence system and usually within a week he will receive a personal answer from the institution.

In addition to materials for the learners, many organizations have produced materials for the teachers or field workers who are helping the listeners to educate themselves. A programme guide usually provides the teacher or field worker with an outline of the courses to be presented, a summary of the objectives and content of each broadcast in the series, suggestions for learning activities before and after the broadcast, and a list of suggested materials for further reading and study.

The following information is adapted from the Radio Literacy Project in Mwanza, United Republic of Tanzania, in order to show you one example of a useful teacher's guide.

Programme title: Health is life

Agriculture theme: cattle dipping.

Home life theme: skin diseases.

Reading: education on contagious diseases; better cattle care.

Discussion questions: 1. Why should we dip our cattle?

2. What skin diseases do you have in your area?

Programme title: Look after our wealth

Agriculture theme: care of agricultural equipment.

Home life theme: care of household utensils.

Reading: care of tractors and ploughs.

Discussion questions: 1. List the different ways of caring for equipment.

2. How do you care for your books?

Programme title: Food for body and mind
Agriculture theme: animal fodder.
Home life theme: food for schoolchildren and the sick.
Reading: books nourish the mind.
Discussion questions: 1. What plans have you for feeding your school-age children?
2. What do you feed your animals on?

Programme title: Unity is strength
Agriculture theme: village accounting.
Home life theme: co-operative work.
Reading: commercial education; Tanzania Patriot.
Discussion questions: 1. How do you keep accounts in your village?
2. What co-operative works are you doing?

Programme title: Modern equipment lightens work
Agriculture theme: training oxen.
Home life theme: use of modern utensils.
Reading: training oxen.
Discussion questions: 1. List the different ways of training oxen.
2. What benefit does modern equipment bring?

As you can see from just this brief excerpt, a teacher's guide is a very useful aid to a literacy teacher or monitor. It tells the teacher what themes will be presented in each broadcast, how the broadcast will be divided into its various components and, perhaps most important, suggestions about possible discussion questions. It would, of course, be possible to make the teacher's guide even more detailed by adding more questions for discussion, outlining specific projects, giving detailed suggestions about recommended reading selections, and so forth.

Supplementary materials for teachers and students are valuable components of the learning process. It is, however, very easy to underestimate the amount of work involved in writing, editing, designing, printing and distributing a substantial amount of printed material. If your organization decides that these materials should form an integral part of the course, you must allow enough time, human energy and money to do the job well.

Distribution of radio programmes and supplementary materials

Earlier in the book I mentioned that radio has the power to reach many people, especially those who live in isolated areas, with the information that is essential to their learning progress. While it is true that radio does have an enormous reach, it is also true that there are problems in trying to accommodate the broadcast programmes to suit everyone's schedule. Some broadcast organizations have attempted to overcome this difficulty by broadcasting the same programme two or three times per day, in order to serve as many listeners as possible.

In Colombia, Accion Cultural Popular has been experimenting with gramophone records as a means of distributing its basic literacy course. The record school, a small group of listeners who meet together regularly, is an extension of and a substitute for the radio in the basic course. ACPO plans to make available to rural families, a set of records and a record player which is adapted to the radio receiver. Rural listeners will be able to repeat the basic course as many times as they want, until they have mastered the ability to read and write, and to perform the basic arithmetical operations.

Using records and record players, or audio tapes and tape recorders, offers the advantage of flexibility in listening times and unlimited repeatability. The major disadvantage to using records and tapes is that you cannot possibly serve the number of families that you can reach by radio broadcasting. Furthermore, it is a relatively expensive means of distribution, especially in sparsely populated areas. It might be more easily justified if used in or around urban areas where the greater concentration of people would reduce the cost per person.

In many parts of the world, the distribution system for printed materials has been a weak element in otherwise well-designed systems. As I noted earlier, if you are going to produce teacher's guides, student workbooks and other learning aids, you must allow sufficient time, energy and budget

to do the job well, and this observation is especially pertinent in the realm of distribution. Some of the common complaints made by listeners are that materials consistently arrive a week or ten days late, or they do not arrive at all. Investigation often reveals that the materials left the printer too late, or they were held too long in regional warehouses, or no one had taken the responsibility for establishing and maintaining local distribution systems.

In many countries, the community development centre, or the office of an agricultural extension service, or the parish church, has served as the collection and distribution point for materials used in an adult education programme. A common pattern is to have the materials brought in lots to a central source where the field worker sees to it that the materials are distributed to individual families and listening groups. Whatever the means used, the distribution system must be reliable. If people get the materials one month and not the next, they lose confidence in the system's capacity to serve their needs and the loss of confidence may eventually affect their attitude about the entire project.

Finally, some provision should be made at the local and regional level for the sale, distribution and repair of radio receivers. As the project develops, more and more people find out about it. They listen to the radio at a friend's house, or they hear the programmes when they visit the nearest town or village. They become interested, they want to participate, but they need a radio receiver. Many projects have set up procedures whereby a person can buy a modestly priced radio, have it delivered to him in a short time, and he can pay for it in instalments over six months or a year.

A good field organization will also set up an efficient system for the repair and replacement of radios. Imagine spending two or three months following a course by radio, until one day you try to turn on your set and find that it does not work. Ideally, in such an instance, a listener with a radio that is not working will inform a field worker who will be able to lend him a radio that he can use until his own has been repaired.

All of these arrangements for the distribution of materials, the repair and replacement of radios—in short, the necessary listener services—require a lot of work and careful planning: an efficient means of delivering materials must be found; a safe place to keep spare radio receivers should be established; some system is needed for receiving payments and taking care of the bookkeeping. These services are essential to the success of the project. In the next two chapters, we will consider in detail how you as a field worker can help to organize listening groups or radio forums, how

you can train volunteers to assist you in your work, and how you can contribute to the evaluation of the effects that the programmes and materials are having on the listening audience.

CHAPTER SIX

Using radio effectively

Until now we have been discussing the design, production and distribution of radio programmes and supplementary materials. Throughout this book I have been stressing the fact that the field worker is the vital link between the originators of the programmes and materials, and the learners who are going to use them. In this chapter we will consider how the field worker in a radio-based literacy project develops methods of communication, organizes and maintains listening groups, and trains volunteer workers to use radio effectively.

Creating awareness and interest

I mentioned in the Introduction that the programme of literacy training that you are now engaged on may be just getting under way, or it may have been a programme which has been in operation for quite some time and is generally successful in its methods. If the literacy project is already in operation, there will be groups of learners, teachers, volunteers, teaching materials, and some type of organizational or administrative structure. If the project is just getting started, you must spend considerable time in establishing an organizational framework to support the teaching of literacy. In either case, your principal concern as a field worker is with the use of radio as a means of extending the literacy project to all who desire to learn.

Let us assume that the people in charge of the radio-based literacy project have made arrangements for the use of production and broadcasting facilities. They are going to broadcast the first few programmes in basic literacy in three to four months and, if the response is favourable, they will continue to broadcast them on a long-term basis. Eventually, if there is sufficient demand for it, they will develop and produce a series of programmes at a higher level of literacy to be broadcast the following year.

But these are long-range plans. Meanwhile, what you need to do right now is to make sure that people know about this project which will be available to them very soon. Listeners have to be motivated to participate, volunteers must be identified and trained, and organizational structures have to be established in the field.

In Chapter Four we talked about formats which are designed to carry complete radio programmes as an integral part of literacy learning. I noted at the end of that chapter that there were other formats in addition to the talk, the interview, the discussion and the drama; one of which was the spot announcement. The radio spot announcement is usually produced in very short segments of fifteen, thirty or sixty seconds and, occasionally, two minutes. The purpose of the 'spot' is to deliver a specific piece of information to an audience in as short a time as possible. Spots are usually broadcast in between regular programmes, or they are given in the middle of a programme during a natural break. Sometimes the spot is designed purely for motivation—it arouses interest, it causes people to take notice, it reminds them to do something. Often it contains simply a name, an address and a sentence or two about the time and place of an event or a service to be offered. During the three or four months before the course is actually broadcast, the spot announcement can be a useful device for telling people that the literacy project will be getting under way soon:

ANNOUNCER: Beginning the first of June, this radio station is going to broadcast some programmes that we think will help many of our listeners. If you need up-to-date information on farm credit, suggestions about caring for your child's health, or if you want to improve your reading and writing skills, these programmes are for you.

What you are doing with this announcement is arousing interest. People hear it, they become aware that the programmes will be offered and you hope that they will be receptive to more information. Soon after these initial announcements have been broadcast, it is a good idea to follow them with a message that contains more specific information:

ANNOUNCER: Beginning the first of June, this station will present a new series of programmes called 'Living and learning'. We'll talk about child care, reading and writing, and improved farming practices. 'Living and learning' will be broadcast every day at 6:30 in the evening, and we'll repeat the programmes the following day at 6:30 in the morning. Remember, 'Living and learning' begins the first of June, at 6:30 in the evening, on this station.

Now you have done more than simply arouse interest. You have specified a title, announced the times of the broadcasts and repeated the major themes of the course. In later announcements, the listeners should be told how to get hold of textbook materials, where they can acquire the weekly newspaper that is published in support of the course and other details that they need to know about this new project.

In addition to stimulating potential learners, the organizers of the radio-based literacy project should be trying to recruit volunteers who will help in the formation of radio schools or listening groups. In some countries, these people are called 'monitors'. Other projects have used the term 'animators', but whatever the title their function is pretty much the same. They serve as helpers, usually with only one group of listeners, and more often than not their efforts are unpaid, hence the commonly used term 'volunteer'. They help the listening group to establish a radio school; they prepare the listeners before the broadcasts; they listen to the broadcast with them, noting objectives, possible points for discussion and difficult parts; and they supplement the learning activities by working out problems, leading discussions or answering questions after the broadcast.

These volunteers should be able to read and write reasonably well, they should have simple calculation skills, and it is helpful if they have two or three years of primary education. Whatever their backgrounds or interests, the factor they have in common is a willingness to share their knowledge with others and the sincere desire to help members of their own families, friends or neighbours to become more productive human beings.

Spot announcements can be used to motivate people to volunteer some of their time to work with listening groups. An initial announcement to encourage volunteers might sound like this:

ANNOUNCER: Beginning the first of June, this radio station will broadcast a series of programmes called 'Living and learning'. These programmes are designed for adults who want to learn to read and write, to improve their farming techniques, or to know more about child care and nutrition. Your family, your friends, your neighbours may want to form a listening group, but they need your help. Can you spare some time each day to help others learn?

Here again, you have aroused interest or stimulated curiosity. These initial messages should be followed by spot announcements with more specific information. Here is a follow-up announcement done in a dramatic format:

The scene: The kitchen of Maria Ramos. Her friend Teresa was just passing by and stopped in to chat for a few moments.

TERESA: Maria, did you hear on the radio about the new programmes 'Living and learning' that are going to start on the first of June?

MARIA: Yes, I heard the announcement a couple of times, but I write . . . I already know how to read pretty well, so I don't think . . .

TERESA: Good! Then you can help us when we start listening to the programmes. I always said that you would make a good teacher.

MARIA: Hey, wait a minute! I'm not a teacher. I don't know anything about teaching someone else to read or write.

TERESA: But you know more about it than we do and every little bit helps. Don't forget now, we start the first of June at 6:30 in the evening. See you then!

In later announcements, people who are going to volunteer their services to your project must be given more specific information about the nature of the literacy project, what roles they can play and all of the other details that they will need to know. Do not forget, too, that most of these volunteers are able to read reasonably well and, in addition to announcements by radio, you should try to reach them by means of posters, newspapers and other forms of print media.

The organization that produces these spot announcements hopes that they will be heard by a good many people who will become interested and motivated to find out more about the project. The listeners will want to know specifically what to do—how to organize themselves, where to get materials, how to keep in contact with the station or its representatives, and so forth. At this point, your activity as a field worker becomes crucial to the success of the project. People have been stimulated to learn, and they are anxious to get started. It is your job to turn this expectation into a reality by helping them to get organized, identifying and training volunteers who are willing to help, providing materials, and continually serving as the link between the programme producers and the learners. The radio spot announcements create awareness of the new programmes that are going to be offered, but the crucial step of becoming an active participant is almost always taken as the result of personal contact between a concerned field worker, and the new learners and volunteers.

From awareness to active participation

In many urban areas, there are on-going classes in literacy and fundamental education for adults. Since most people are employed during the day, these classes are usually offered in the early evening hours starting at 6:00 or 7:00 p.m. The participants come to a school, a municipal centre, a union hall or a building which is affiliated with a religious organization. My point is that in cities you are likely to find that physical facilities are available, teachers are working with adult learners, and enrolment procedures have long been established. As a literacy worker in an urban environment, you can contact people quickly, you can identify potential volunteer workers and the channels of communication from one sector to another operate with relatively high efficiency.

In most rural areas, however, there are fewer schools, they are much further apart, there is less infrastructure and administrative network, so that the problems of communication are much more severe. As a field worker in a rural setting, you probably live in a village or town which may be considered your centre or base of operation. You may have lived in this area all your life, in which case you are already familiar with municipal officials, religious leaders, school-teachers, health and agriculture officials, and with individual families in the town or village. If you are a newcomer to the area, you should make every effort to get to know as many people as you can as quickly as possible. People in the village form a communications and information network that is going to be vital to your work; you must learn early in the project how to make efficient use of this network.

You can use this communications network to identify promising people who are willing to offer their services as monitors or teachers to work with small groups of radio listeners. The people you are looking for should, of course, be literate and, perhaps even more important, they must be highly motivated to help other people with their new learning experiences.

By talking to as many people in your town or village as you can, you will soon discover that they know of several people who would make good volunteers in a radio-based literacy project. Obviously, it would be ideal if you could visit every family that lives in the surrounding areas to talk with them personally, but this is not always possible. In many rural areas it is not at all uncommon for some families to live three or four hours by horseback from the nearest main road and field workers simply do not have the time to visit each family. Therefore, you must depend on the communications network that exists in your area to extend your reach to

as many people as possible. The information about your project, the fact that you are looking for volunteers, is passed from person to person and, eventually, people start coming to you to express their interest and to find out more about the project.

Preparing volunteers to work with listening groups

As soon as you have identified a few volunteers who are willing to participate, you should try to get them together to teach them how to be effective in working with adult learners in a radio-based literacy project. If you start preparing volunteers three or four weeks before the broadcasts actually begin, you will have enough time to help them to develop their self-confidence in utilizing the radio programmes and other materials. As far as the actual setting for these meetings is concerned, you can meet a group of volunteers almost anywhere, depending on the facilities that are available in your town or village; a municipal centre, a school building or, if necessary, in a private home. You need enough space to accommodate the number of people who are going to be trained and it is desirable to have some tables and chairs so they can take notes and do some of the practice exercises. A blackboard for demonstrating some of the techniques that will be used in the project is also useful.

There will most likely be volunteers who live a considerable distance from the town or village where you hold your organizational and instructional meetings. These people may not be able to attend every meeting, so you must do the best you can in adapting to their needs and problems. You will have to get out to see these people as early in the project as possible and you should try to see them as often as you can, as long as they continue to participate. Your personal contact is valuable not only as a means of preparing them in utilization but, even more important, regular visits from a field worker have a very positive effect on their morale. How these volunteers *feel* about what they are doing is just as important as learning the basic techniques of using the radio programmes and the supplementary materials.

Let us assume now that twenty or twenty-five people (the number is not really important—it could be seven or eight people) have agreed to come into your village one afternoon each week to learn how to become effective volunteer workers. In the next few pages I am going to suggest some approaches and techniques that you might find useful in working with these volunteers. Keep in mind, though, that as soon as you have had some

experience in preparing others, you will develop your own principles, your own specific objectives and your own style as a teacher and group leader.

The first meeting of the volunteers: general orientation

In this first meeting you are going to establish a relationship between your personality and the personalities of the volunteers. You introduce yourself to the group, and you explain that you are a field worker with a radio-based literacy project sponsored by a ministry, a private organization, or whatever your administrative arrangement may be. You should then ask the members of your group to introduce themselves by giving their names, where they live, which groups of listeners they will be working with, and any other information they wish to provide about themselves. These introductions may seem like a polite formality, but they are really more important than that. The volunteers need to feel a sense of solidarity with you and your organization, and with each other as fellow workers in an important and worthwhile undertaking.

Ideally in this first meeting you would be able to pass out some of the supplementary materials that they are going to be using over the next months. They are probably going to discover that some of the material in the broadcasts, textbooks and newspapers is going to be new to them as well as to their listeners, and they will appreciate the opportunity to study the materials beforehand. It would also be very helpful, in this first meeting, if they could listen to one of the radio programmes that they will actually be using. If the producers are a few weeks ahead in their programme recording, it should be possible to broadcast one or two programmes at several different times throughout the week, so that field workers could schedule their meetings to take advantage of one of these pilot broadcasts. Even greater flexibility would be offered if each field worker were provided with an inexpensive audio tape recorder and a modest supply of tapes. In this way the programme could be recorded from an ordinary radio receiver onto an audio tape, thereby allowing meetings to be held at any time without having to adhere to a broadcast schedule. Now that battery-operated tape recorders are available at very low prices, it is not at all unrealistic to think about buying one of these recorders to enhance your effectiveness as a field worker.

You might conclude this first orientation session by allowing fifteen minutes for questions, comments and suggestions. You will learn a great deal about the volunteers by encouraging them to participate actively in

their own orientation and they will, of course, learn a great deal from each other. If possible you might offer tea, coffee or a cold drink toward the end of the meeting and allow enough time for you to get to know as many individual volunteers as possible, and for them to get to know you—and each other. Before this first meeting is finished it might be worthwhile to stimulate their interest by presenting them with a question or problem which will be taken up in the first part of the next meeting. For instance, you could ask 'Now that we have assembled for this initial session, how do you think you see your role as a volunteer working with adult learners?', or 'What steps do you think a learner must go through in order to understand the relationship between letters or written symbols, and the sounds they represent?' You ask them to think about these questions during the coming week since you will discuss them at your next meeting.

Subsequent meetings with volunteers: learning to use radio effectively

There are many ways to conduct training meetings after the first orientation session. There is no rigid formula that has to be followed. Early in their training the volunteers must understand that adults do not learn in the same way as children. Many of the volunteers will remember the teaching techniques that they themselves encountered as primary school pupils and they will want to apply these techniques in the new learning situation with adults. But the volunteer must be reminded that the adult learner does not want to be talked down to, nor does he need to be told what to do in the authoritarian manner that is often associated with formal schooling. Adults, after all, have had more experience than schoolchildren; they have a great deal to contribute to their own learning as well as to the learning of others in the listening group. Perhaps the most important characteristic of the adult as a learner is that he participates in any learning situation because he is motivated by the idea that he is going to derive some immediate benefits from it. Young learners can be told that the things they are learning will be useful to them 'in the future' but the adult wants to apply new knowledge and skills to the solution of immediate problems and necessities.

You should explain to the volunteers fairly early in their training the approach that your organization is going to take towards literacy. If literacy is to be an integral part of a comprehensive programme of fundamental adult education, they must understand the learning objectives that

have been specified, so they can help their listening groups to put the new information and concepts into practice. They should realize that to an adult learning to read and write seems like an insurmountable problem. Adults are sometimes very sensitive about the fact that they cannot read and write, and every effort must be made to protect their dignity. A good volunteer monitor must realize that being illiterate is not a sign of laziness or stupidity. It is more likely a lack of opportunity which accounts for a person not being able to read or write. This, of course, is exactly what you are now trying to provide by means of radio, materials and personnel—a second chance, an opportunity based on the principle that has been used all over the world in literacy programmes—'It's never too late to learn'.

If you raised some basic questions or problems in the first orientation meeting, you should ask for comments and discussion before the participants lose interest in these questions. In fact, this can be a weekly procedure—one week you raise the question or pose a problem, and the next week you have discussion or consideration. The particular questions or topics that you choose to discuss are really less important than the methods you use in conducting these meetings. If you lead discussions in which the volunteers are encouraged to offer their views, where no one is criticized for holding an unpopular opinion, and where respect for the rights of others is carefully and conscientiously observed, the volunteers will conduct discussions with their listening groups in much the same way.

On the other hand, if you are authoritarian, dogmatic and intolerant of the opinions of others, the volunteers will follow your example and be rigid and authoritarian with their listening groups. It is important to remember that, as a field worker, you are doing far more in these sessions than simply handing out materials and setting rules for being a good monitor. You are a model for the people you are working with, and they will take away from these sessions everything that you offer them in the way of teaching and guidance practices.

As soon as the volunteer monitors have become familiar with the general aims and methods of the project, it is a good idea to teach them some specific practices that they will be able to use when they begin working with their listening groups.

Organizing the listening group

In sparsely populated areas a listening group might consist of one or two families, and a volunteer who helps them with their learning. In more densely populated areas a group might consist of twenty to twenty-five or

even more people, aided by one and sometimes two volunteer monitors. Whatever their number, the purpose of the learning group is the same: to gather together on a regular basis to listen to the broadcasts of radio programmes on literacy and fundamental education.

As has been discovered in many countries throughout the world, organizing listening groups in not always an easy task. People in rural areas work very hard; they are usually tired in the evening; they don't have much time to spare in the early morning before going to work. It is quite understandable that they might prefer to use their spare time in pure relaxation—games, sports, other enjoyable activities—rather than joining a radio listening group. People must be motivated and stimulated to learn, and they must see some rewards for becoming participants in the project.

The organizers of radio clubs in Niger discovered that when the clubs were just getting started, there was reluctance on the part of a large portion of the population. As reported in the Unesco case study of radio clubs in Niger, 'There was an attitude of distrust; people feared that their ideas would be taken down and, worst of all, recorded by a machine. They are afraid to talk; they think they will say wrong things which might cause them trouble. They are afraid to show their disapproval of the political authorities. They do not want to get mixed up with the majority because of their political opinion . . . Many participants, especially peasants, have yet to be convinced that any working hours they devote to the radio clubs is not time lost.'

In spite of this reluctance to be organized, the project leaders noted a general interest in things new, much co-operation from those up to the age of 40, a kind of rivalry between certain strata of the population, and the unreserved support of many local authorities and concerned public servants. Teachers in villages, agricultural leaders, important tribal leaders were approached by field organizers in order to enlist their aid in establishing the radio clubs.

As I mentioned earlier in the monograph, you must learn how to use the communications and information network of prominent people in villages and towns, and you must encourage the teachers and monitors who are going to work with you in the literacy project to do likewise. Encourage them to find out if local groups are already in existence and to work with these groups: groups associated with churches, groups formed for co-operative buying purposes, groups of neighbours who get together for sports and recreation on a regular basis.

Organizing listening groups takes a great deal of time and human

effort, and it is very easy to underestimate just how time consuming this work can be. The following excerpt from the Unesco case study of the Radio Rural Forum in India is very instructive in this regard:

> One of the first lessons learned was the amount of lead time and personnel necessary to organize a group of forums. It had been planned to start the programme on 26 January 1956—Republic Day in India. However, the chief organizer could not be released from his duties to join the project until 31 January, and the district organizers came to the project at various times between early January and 11 February. When the chief organizer arrived, he drew up detailed guides for the organizers and for the officers who would conduct the forums, and began to tour the districts to supervise and to aid the district organizers as well as to win the co-operation of the numerous development officials who would be concerned with the project. Originally, it had been intended that the part-time organizers should set up the forums, with the district organizers supervising the task. This plan did not prove feasible, and the district organizers themselves had to visit the villages, to confer with the leaders, to explain the nature of the forums, to secure approval and help in selecting the chairman, the convener, and the approximately twenty villagers who were to belong to each group. Permission had also to be sought from appropriate authorities if the forums were to meet in the village council (*gram panchayat*) rooms or other public quarters, and if the secretary of the *panchayat* or a school-teacher were to be used as convener of a forum. Another duty of the organizer was to check on the village radio set—if a receiver was available, and if it was in working order. If not, administrative machinery had to be set in motion to secure a set or have the old one repaired. As soon as the forums were set up, there were a great number of difficulties to be overcome. In all, both the chief and the district organizers found it necessary to travel through their territory fifteen to twenty days a month. Because of the shortness of time, it was found necessary to cut back on the planned training programme. Instead of holding central classes for the district and part-time organizers, and for the forum officers, the chief organizer talked individually with the district organizers, and the district organizers talked with part-time organizers, forum chairmen, and conveners, individually or in small groups. It was not until 19 February that the necessary number of forums had been organized and supplied, and the broadcasts could begin.

Making your literacy project known, working through village leaders, training monitors to extend your work in more remote rural areas are the

basic principles of organization, whether you call the listening groups 'radio rural forums' as in India, 'radio clubs' as in Niger and many other countries, or 'radio schools' as in Colombia and other countries of Latin America.

Some listening groups have taken the idea of a 'radio school' quite literally. They have tried to construct, in a home or in some public building, a listening area that resembles an actual classroom. It really is not necessary to go to a lot of trouble to re-create a classroom—in fact, it may be very unproductive. Adults usually do not want to sit at desks or on benches in neat rows like school-children. It offends their sense of dignity by making them feel like passive objects rather than active subjects in their own learning.

All that is needed to make people feel at ease in the group is some place to gather which is relatively quiet and free from interruption. In some countries, listening groups meet in the evenings in school rooms. Some groups use the facilities of churches, while others meet in union halls. In many countries listening groups meet outside in a shady place to listen to a portable radio. If the group is meeting in someone's home, it is quite appropriate for the learners to seat themselves around a large table so that everyone can hear the radio clearly and, after the broadcast, they have a place to practise their writing and class exercises.

If the first programme is going to be broadcast, let us say, on the first day of June, the volunteer ought to be meeting with the listening group once or twice a week, starting about the tenth of May. As the volunteer himself learns about the project in the orientation sessions that you have been holding, he passes this information along to the members of the listening group. He must explain to them the approach to literacy, what learning to read and write is all about, why they are going to be learning by means of radio, how the supplementary materials are going to be used, and all of the other things that the listeners will need to know to make maximum use of their new learning opportunity. In this short period of time before the actual broadcasts begin, the monitor should be creating a suitable environment for the learning that is going to take place.

One of the things that frequently worries volunteer monitors is specifically what they should be doing once the course gets under way. For the sake of convenience, the specific things that a monitor does to help the members of his group are usually divided into three phases: pre-broadcast, during the broadcast and post-broadcast activities. For now, let us concentrate on the specific pre-broadcast activities of the monitor and take up the other activities in subsequent pages.

Pre-broadcast activities

In preparing the listening group for the broadcast, the monitor must first attend to some relatively simple things such as tuning the radio receiver for best programme reception, passing out the necessary materials, papers, pencils, notebooks, etc., and in general preparing the physical learning environment. The volunteers should be told that they must try to get the group together about fifteen minutes before the broadcast actually begins. Allowing a few minutes for people to settle themselves, this provides the group with about ten minutes for actual pre-broadcast preparation. The listeners must understand right from the beginning that the pre-broadcast period is not just simply a time to wait around for the programmes to begin, nor is it a time to exchange talk about the day's activities. It is an integral part of the course and the monitor must exercise strong leadership as a motivator and stimulator.

One of the first things the monitor should do in the pre-broadcast period is ask the members of the group if they have any questions or comments from the last time they met. If the question can be answered quickly and concisely, it can be dealt with at the time. A long and difficult question with an answer requiring considerable explanation should be noted and explored further when time permits after the radio broadcast.

Probably the most useful function that the volunteer leader can render to the group is to prepare them for what they are going to hear on the radio by helping them to improve their listening and comprehension skills. To do this, of course, the monitor must know beforehand what the programme will contain. This is why it is so important for him to have a guide or outline of all the programmes to be broadcast. In helping them to improve their listening skills, the monitor must explain to the members of his group:

(a) *The purpose of the programme:* For example, is it designed to introduce the letter 'B'? Is it attempting to present practical problems requiring a knowledge of simple arithmetic? Is the purpose to relate a certain letter of the alphabet to several words that are important in developing a concept of good nutrition? Or, if it is a programme later in the series, is it given over to practical exercises on materials that have been learned previously?

(b) *The sequence of the programme:* For example, the first part of a later programme may be a review of some of the words beginning with the vowel sound 'ah'. In the second portion of the programme the professor is going to introduce the idea of constructing simple

sentences—there must be at least a subject and a verb (or whatever the fundamental parts of your own language are) followed by examples of simple sentences. The last section is called 'the listener's mailbox'—the professor reads letters, verses, riddles and songs sent in by listening groups throughout the country.

(c) *Emphasis and subordination:* In any twenty or thirty minute programme some things are going to be more important than others. Learners in general, but especially inexperienced learners, cannot absorb everything that is presented to them, and they need guidance on how to distinguish between those programme elements that are essential and those that are incidental. They need to be able to distinguish between basic principles or concepts, and examples that are presented to amplify and clarify those concepts.

In your orientation sessions you have to teach the volunteers that good listening is an acquired skill. There is much more involved than simply telling someone to 'be quiet and pay attention'. A good listener has to grasp the structure of the subject matter. This is why the learner needs guidance in listening for basic principles, in connecting one segment of a programme to another, and in learning how to distinguish between segments that are very important and segments that are not really essential. The best way for the volunteer to learn these techniques for improving listening skills is to actually try them out under your supervision.

If you are working with fifteen or twenty volunteers, you could divide them into four or five groups to let them practise with each other. One volunteer assumes the role of group monitor while the others act as the learners. He conducts the pre-broadcast activities with the group for five or ten minutes, then someone else takes a turn, until finally everyone has had the opportunity to put their newly acquired skills into practice.

If the volunteer has done his work well in the ten minutes preceding the radio broadcast, the learners will be anxious to hear the programme, and they will be well prepared to get as much as possible out of it. We assume, then, that the listeners are giving their full attention to the programme as it goes along, but what does the monitor do while the programme is actually in progress?

During the broadcast

A good monitor is as actively involved during the programme as he is before and after it. He must never leave the listening group just because

he knows in advance from the written materials what the broadcast is going to cover. As I mentioned earlier, it is highly desirable to have a programme guide that tells at least what specific topics will be covered, what the learners are expected to get out of the programme, and what points are most important in the development of the content. The monitor must listen along with members of the group, but he has the added task of analysing the programme as it progresses. He should be noting:

(a) Points raised in the programme that will form the basis for a good discussion;
(b) Difficult points that may need explanation or clarification after the broadcast;
(c) Aspects of the programme content that will require repetition and practice afterwards.

In addition, a good monitor must try to observe the reactions of the listeners during the programme: are they bored? are they losing interest? do they seem to be frowning or look puzzled? are they participating in the exercises when called for in the radio programme? It requires a great deal of practice to make accurate and sensitive observations about learners; the volunteer monitors will become much more skilled at it as the project progresses.

Radio-based literacy projects in many parts of the world have used a technique generally referred to as 'radio-vision'. As you might imagine, radio-vision consists of using radio, audio tape or sound records in conjunction with a visual element, usually colour slides and filmstrips, or large illustrations. Although radio-vision offers the members of the listening group the advantage of having slides and filmstrips in colour to enrich and clarify the radio materials, it does, of course, require each group to have an audio tape recorder, a filmstrip or slide projector, and an adequate and reliable supply system to furnish audio tapes, slides and filmstrips. In urban learning centres it is not unreasonable to think about supplying schools, municipal centres and other institutions with the necessary equipment to make use of this valuable learning technique. In rural areas, however, most literacy projects have felt that the cost of equipment and the difficulties of distribution have made it extremely difficult to implement radio-vision on a large scale.

If radio-vision using a combination of audio tapes, sound records, slides and filmstrips seems unworkable for your project, it is quite possible to employ the same basic principle of combined sight and sound learning by furnishing listening groups with wall maps, large illustrations, letter cards, number tables, nutrition charts, etc., which will be used in con-

junction with the regular radio broadcasts. In order to use these visual materials effectively, the monitors need to know how they will be combined with the radio programmes—which is another good reason for furnishing every monitor with a programme guide which lists topics, objectives and, in this case, necessary visual materials.

A good example of the use of pictorial illustration used in conjunction with radio broadcasts is given in the Unesco publication, *Radio and television in literacy*, by John Maddison:

> Some of the ways in which, according to the replies, visual materials are used at the receiving end by instructors in conjunction with broadcasts, are a sort of radiovision of a less pre-controlled kind. An example is the project in Iran. Here pictorial illustration backs the radio message so as to increase visual and auditory memory. The instructors are supplied in advance with pictures. Radio lessons begin with the dramatization of a subject from the week's work in the conventional literacy course for face-to-face classes. Ten sentences with new words are then read at slow dictation speed, while the instructor points at a wall illustration. At each new word, a bell rings and the instructor underlines the word heavily in red. (The Jamaican radio project uses chimes to alert the monitor of impending action.) The ten sentences are read again with the bells. The broadcast ends, down comes the wall chart and the instructor begins the follow-up lesson.

You could, of course, use the same principle by referring to illustrations and exercises in the text/workbooks of the individual learners. The advantage of the wall chart or illustration is that it can show more detail in larger scale than a text illustration. A large wall map or drawing also gives the learners a change of visual concentration—from looking at their books individually to looking at an illustration collectively.

Once the broadcast is under way, the monitors and learners must not become passive listeners. With time and patience, the entire group, including the monitor will find that they become more skilful in listening to and in taking part in the programme structure, and thus they will become more efficient in the activities that follow the broadcasts.

Activities after the broadcast

Although we tend to think of the radio programmes as being the principal source of information and education, much of the learning in a radio-based literacy project occurs as a result of carefully designed post-

broadcast activities. The volunteer monitor must try to clarify and enrich the materials contained in the broadcast in a variety of ways, keeping in mind that the need of individuals can vary greatly. At the end of each programme one listener might have a question, another will be anxious to get involved in a discussion, another will want to practise some of the writing skills that were introduced, and others may have had trouble in comprehending certain aspects of the material.

There is a tendency on the part of volunteers and teachers who are working with radio for the first time to go over the broadcast material item by item, essentially re-presenting the content. This is an obvious way of following up on a programme, but it is not very imaginative. Furthermore, it is not very productive with adult learners, especially when many of them are physically tired after a day of hard work. You can suggest to the monitors that they should use different techniques and different combinations of techniques, trying not to become rigid or set in their ways. In the next few pages I am going to suggest a number of things that volunteers can do after each programme: question and answer techniques; practice and drill work; games and puzzles and concept development.

Question and answer techniques

After the broadcast some listeners will no doubt have questions that should be answered immediately. If a point, an expression or an example has been missed or misunderstood, learners will feel ill at ease until the matter has been resolved. If the volunteer is able to answer the question he should, of course, do so, but if he does not have a ready answer he must understand that there is no shame attached to saying 'I don't know, but I will find out as soon as I can'. Many teachers, professors and auxiliaries have been embarrassed to admit that they did not know the answer to a learner's question. The volunteer has to see his role as that of a partner in the learning enterprise—a person who is willing to share what skills he has with others, but by no means does he know everything there is to know.

A learner usually asks a question in a simple, straightforward manner to gain information or to clarify a point that is unclear. A monitor, however, can use well-designed questions for a wide variety of purposes. For instance, the monitor can use a question to find out if a learner was paying attention, if he grasped the main points of the programme, or if he remembers previously acquired information. More important, however, is the question as a means of stimulating learners by leading them to see new dimensions of a problem, and new relationships among the themes

they have been studying. Let us take as an example a programme which contains information about vaccinating farm animals to protect them from certain diseases. You could ask each learner to give a definition of vaccination, to spell the word correctly, or to name three diseases that are prevented by vaccination. Questions such as these are, of course, perfectly legitimate. If nothing else they serve to reinforce basic factual information. They are, however, designed to encourage a certain style of learning which is based on the ability to spell, memorize and define.

On a different level of learning, you might ask 'how does vaccination fit into an over-all health programme?' or 'how can neighbours profit by buying vaccine and syringes on a co-operative basis?' Asking good questions is a technique that can be learned through practice and in these initial orientation sessions it is very helpful if you spend some time explaining the different styles of asking questions. Then, let the volunteers practise with other members of the group before they try out the new techniques with their listening groups. Good questions stimulate learners to discover within themselves the resources, the applications and the relevance that this learning must have to be of any real use to them. In addition, a series of good questions can help the monitor to discover where review, practice and drill work are necessary on a group or individual basis.

Practice and drill work: reinforcing new skills

Many of the radio programmes, especially in the early stages of the project, are going to devote substantial portions of time to the mastery of fundamental skills in learning to read and write. As I mentioned in the introduction, each language has its own structure, its own system of symbols and its own rules of grammar, so it is impossible to develop general principles regarding the scope and sequence of instruction in basic literacy that would be applicable to every language.

Whether you are using Thai, Urdu or any other language, the monitors must be very skilful and tactful in directing practice and drill sessions with adult learners. Mastering fundamental reading and writing skills in any language is a slow, often tedious process which requires repetition and reinforcement over a fairly long period of time. On the other hand, adults have a fairly low tolerance for frustration and delayed reward, so it is imperative that they have early and frequent successes in learning these new skills. It is very important that the exercises be structured in such a way that the learners can do *something* almost immediately, whether it be recognize a word, make a letter or symbol. use a written number or grasp an elementary fact.

For instance, in discussing the radio talk as a programming format, I described a technique that gets the listener participating actively during the programme. I purposely chose the letter 'O' for practice within the programme segment, because in English the letters 'O' and 'I' are much easier to form than the letters 'A' and 'E'. In a typical follow-up session after a broadcast where 'O' has been introduced, the monitor would follow a procedure that immediately reinforces the activity pursued during the broadcast, by having everyone make a line or two of 'Os'. As they are practising the letters, he should try to work at least once with each individual, helping him to get the feeling of making the circle, encouraging him when it becomes slightly off-centre, and so on, constantly reminding the learner that he is now making letters! It may seem terribly simple to the monitor to do this but, to an adult who has never before tried to read and write, it is quite an accomplishment and his ego is bolstered immediately. Before going on to other letters, the monitor can introduce different words that contain an 'O' at the beginning, in the middle and at the end. He can move on to practise other letters but come back from time to time to review 'O'.

Whatever system of literacy teaching your project employs, whether it stresses letter recognition and reproduction, or recognition of whole words and simple sentences, the monitor must strive not only to build basic literacy skills, but also to build the confidence of each participant by leading him through a series of exercises in which success is emphasized. As the basic skills are acquired and reinforced, the monitor will need to have at his disposal some techniques for expanding the basic skills into a usable, functional, practical literacy.

Games, puzzles and other diversions—expanding basic skills

So far I have made learning from radio sound like pretty serious work—and indeed it is. This does not mean, however, that learning reading, writing, mathematics and all the other useful skills cannot be enjoyable. As I mentioned earlier, if the programmes are being received early in the evening, the learners may be physically tired and they really are not able to concentrate on extensive review and drill work after every broadcast. Those who listen in the early morning hours may be better rested, but they may also be pressed for time since they must be off to work or to attend to the needs of their families. Volunteer monitors will no doubt discover that a variety of activities is much more productive in the long run than doing the same things over and over again. There are hundreds of games,

puzzles and exercises which employ verbal skills; it would take an entire book to describe them all. I will give you just a few examples here of ways in which the monitor can encourage the development and expansion of literacy skills, and I am sure that you will be able to think of many more as you continue your work with adult learners.

One game that makes learning new words enjoyable is played by making up two columns of words, one scrambled, one clear, as in Figure 4. Each learner connects with a pencil line a scrambled word in Column I to the word as it is spelled correctly in Column II. The solution for this particular group of words would then look like this:

FIGURE 4. *A scrambled word game*

COLUMN I	COLUMN II
1. CLDANE	1. PLANT
2. RODO	2. FLOOR
3. CIHAR	3. LIGHT
4. LTPAN	4. CANDLE
5. TLBEA	5. BED
6. LGTHI	6. DOOR
7. UFRIT	7. WINDOW
8. DWINWO	8. CHAIR
9. DBE	9. TABLE
10. RLOOF	10. FRUIT

COLUMN I	COLUMN II
1. CLDANE	1. PLANT
2. RODO	2. FLOOR
3. CIHAR	3. LIGHT
4. LTPAN	4. CANDLE
5. TLBEA	5. BED
6. LGTHI	6. DOOR
7. UFRIT	7. WINDOW
8. DWINWO	8. CHAIR
9. DBE	9. TABLE
10. RLOOF	10. FRUIT

An exercise like this can be carried out by individuals, by two people working together or by a group. As the learners become more skilled at it, you can eliminate the cue words in Column II, so that they simply have to unscramble a group of words in a certain amount of time. Some learners become very skilled at this game, and it is a good challenge to each monitor's ingenuity to keep coming up with different words and different combinations of letters, which will challenge learners at all different levels.

As the learners become more skilled at word recognition, you can make

up letter charts that contain hidden words as in Figure 5. Each member of the listening group tries to discover as many words as he can in this maze of letters. Or you can make a game out of it by dividing the group into two, three or four teams; the group that discovers the most words wins the game. If games like this appear in the text/workbooks, the words can be circled right on the page. If you have some extra paper, each group can make up its own letter charts. The game can be played on a blackboard, and it can also be played on the ground if necessary. The words can simply be circled with a pencil, as in the second example.

FIGURE 5. *A hidden word game*

B	O	O	K	S	M	S	C	O	R
R	O	S	T	C	R	Y	S	T	V
P	G	O	M	L	Z	O	X	M	L
L	V	B	A	Z	C	L	E	P	O
A	M	P	L	L	G	O	N	I	S
N	F	E	T	I	R	T	M	Y	F
T	E	N	C	V	R	H	M	Y	E
T	U	M	R	E	Z	E	M	E	Y
H	Z	I	M	L	Z	S	V	A	E
O	M	L	M	L	A	S	Y	L	O
A	G	K	C	O	V	S	E	E	N
H	L	E	N	O	R	I	R	Y	V
Z	A	P	P	L	E	M	A	Z	M
A	I	E	V	M	I	N	S	O	H
F	B	O	R	S	E	O	E	S	T
H	A	I	M	N	L	R	A	S	T
H	C	O	L	D	L	E	O	F	K
M	U	V	W	Y	J	A	K	W	Z
M	Z	H	A	I	R	Y	H	E	L
H	A	V	H	M	Y	E	D	O	G

Depending on the level of literacy that each group has achieved, you could set up the chart in such a way that only words with 'O' are hidden, or, if you are stressing words that are related to nutrition, all the words could be fruits and vegetables, or, as in the chart I have given here, there is a random collection of words which are not united by any particular letter, combination of letters or subject.

Finally, I would like to suggest two games that are learned quickly and can easily be played by people in their leisure time for amusement as well as for expanding literacy skills. For the first game, let us assume that the radio programme has just reviewed the letter 'F'. Many words were given which contained an 'F' in various positions, simple sentences were

B	O	O	K	S	M	S	C	Q	R
R	Q	S	T	C	R	Y	S	T	V
P	G	Q	M	L	Z	O	X	M	L
L	V	B	A	Z	C	L	E	P	Q
A	M	P	L	L	G	O	N	I	S
N	F	E	T	I	R	T	M	Y	F
T	E	N	C	V	R	H	M	Y	E
T	U	M	R	E	Z	E	M	E	Y
H	Z	I	M	L	Z	S	V	A	E
O	M	L	M	L	A	S	Y	L	O
A	G	K	C	O	V	S	E	E	N
H	L	E	N	Q	R	I	R	Y	V
Z	A	P	P	L	E	M	A	Z	M
A	I	E	V	M	I	N	S	Q	H
F	B	O	R	S	E	Q	E	S	T
H	A	I	M	N	L	R	A	S	T
H	C	O	L	D	L	E	O	F	K
M	U	V	W	Y	J	A	K	W	Z
M	Z	H	A	I	R	Y	H	E	L
H	A	V	H	M	Y	E	D	O	G

constructed using words with 'F' and the listeners were asked to continue practising with the letter 'F' after the programme. The monitor might have the listeners practise 'F' words in some selected drill exercises for five or ten minutes, followed by this first word game that reinforces and expands their learning.

This is a game for two players; one player chooses a five- or six-letter word that begins with 'F', but he does not tell the other player what the word is. The first player, the one who has chosen the word, writes on the blackboard, or on a sheet of paper, or on the ground with a stick, the letter 'F' followed by lines or dashes that represent the other letters in the word he is thinking about.

The second player has to guess what the word is by asking the first player 'is there an "E" in your word?', 'is there an "A" in your word?', and so forth. Each time the second player asks if there is a certain letter in the word, he gets a 'yes' or 'no' answer from the first player. What makes the game fun is that the guesser is allowed only a certain number of 'no' answers, and if he does not guess the word before he has received, say, ten 'no' answers, the first player wins the game. The actual play of the game would go something like this:

FIRST PLAYER: My word begins with the letter 'F' and it has six letters. *He then writes it down like this:* F – – – – –

SECOND PLAYER: Is there an 'E' in the word?

FIRST PLAYER: Yes, there is an 'E' in my word. *So he puts the letter 'E' where it belongs in the word:* F – – – E –.

SECOND PLAYER: Is there an 'I' in the word?

FIRST PLAYER: No, there is no 'I' in the word. *In this turn the second player has guessed a letter that is not contained in the word, so the second player receives one 'no' answer.*

SECOND PLAYER: Is there an 'A' in the word?

FIRST PLAYER: Yes, there is an 'A'. *So he puts the letter 'A' where it belongs in the word.* F A – – E –.

SECOND PLAYER: Is there an 'M' in the word?

FIRST PLAYER: No, the word does not have an 'M'. *Again, the second player has guessed a letter that is not in the word, so he now has two 'no' answers.*

SECOND PLAYER: Is there an 'N' in it?

FIRST PLAYER: No, no 'N'. *Second player now has three 'no' answers.*

SECOND PLAYER: Is there an 'R' in it?

FIRST PLAYER: Yes. *He puts the 'R' in the word where it belongs, and the word now looks like this:* F A – – E R.

The game goes on like this until the second player either figures out the word of the first player (in this case the word is FATHER) or until he uses up his ten 'no' answers.

As you can see, the game is enjoyable and it has a great deal of flexibility. You can play it with any letter or combination of letters that you want to practise—at the beginning, in the middle or at the end of the word. You can play it with short words or long words, and you can change the number of 'no' answers from ten to eight, or from ten to twelve, depending on the skill of the players.

Another game that makes learning new words more enjoyable is a card game that can be played by two, three or four players. For this game you need to have a collection of cards that you can easily make by cutting up pieces of cardboard or heavy paper on which you print the letters of the alphabet. You can make any number of cards that you want, but you will need to have more vowel cards than consonant cards, and more of the commonly used consonants than the less frequently used consonants. The game begins by shuffling all of the cards together and dealing ten cards to each player. The remainder of the cards are placed in a deck.

One player begins the game by spelling a word with his cards. He puts the cards down on the table, counting one point for each letter in the word that he has just spelled. As soon as the first player has completed a word, he brings his number of cards up to ten again by replacing the ones he has laid down from the deck.

The second player must then spell a word that starts with the last letter of the word that the first player has already put down. The second player counts the number of points that he has scored, then takes cards from the deck to replace those that he has used to spell his word. The play moves to the third player, who forms another word with his cards, using the last letter of the word that was formed by the second player. In actual play the game would look like this:

First play: The first player, like all the other players in the game, starts out with ten cards in his hand. On his first play he puts six cards on the table to spell: FATHER. As soon as he plays these six cards from his hand, he draws six new cards from the deck to bring the number of cards in his hand back to ten.

Second play: The second player must now put down his letters using the letter 'R' in FATHER as the first letter of his word. Depending on the cards that he holds, he might play:

FATHER *or* FATHER *or* FATHER
O I A
O D N
M E G
S R E

The second player then replaces the number of cards that he has used to spell his word.

Third play: Let's say that the second player combined FATHER with ROOMS to give: FATHER
O
O
M
S

The third player must now play on the 'S' in ROOMS, so he might play one of these combinations, again, depending on the letters in his hand:

FATHER *or* FATHER *or* FATHER
O O O
O O O
M M M
SMALL SPEND STOP

The play continues like this making a continuous chain of words until one player lays down all of his cards, which ends the game, or until none of the players can form any more words with the cards remaining in their hands. The object of the game is to score the highest number of points. The players who spell longer words will, of course, get higher scores than those who spell very short words, so it is a good way to get the learners to build up their vocabulary. This game, like the one I described before it, can also be played as a leisure-time activity as well as for learning purposes.

So far in this chapter I have been concentrating on the acquisition and refinement of basic skills in reading and writing. Now I would like to offer some suggestions as to how the volunteers can make use of these newly acquired literacy skills to develop concepts for the adult learners.

Developing concepts

In a programme which contains a segment on the letter 'M', the word 'milk' is introduced as an example of a word containing 'M' in the initial position. (Other words, of course, can be used, but I want to concentrate

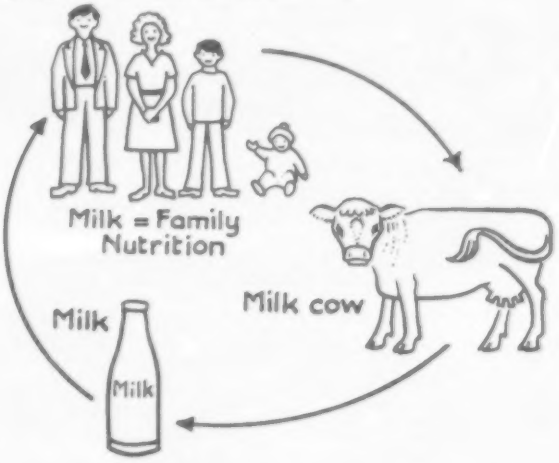
on the single word 'milk' to demonstrate the development of a particular concept.)

In a later programme segment the radio professor comes back to the word milk to clarify and expand its significance. It is more than just a combination of letters, and it is more than just a word to be added to the growing vocabulary. Milk is necessary to good nutrition and a balanced diet for adults, as well as for children. Its value as a source of protein, vitamin D and calcium is explained, thus progressing from the word to the concept; from a combination of letters which represent a combination of sounds, to the beginning of an understanding of an important concept in health and nutrition.

What I have just described here is only the barest outline of a programme. Obviously, other 'M' words are used, other aspects of nutrition are mentioned, a few minutes of the programme may be given over to light diversion, there may be musical interludes and so forth. The important point, however, is that the listener grasps the central concept of the programme: that the word milk is not simply an exercise in word building—it is a word that represents an important and integral part of their daily diet, especially for their children.

One of the most valuable ways the monitor can help the members of his listening group to develop concepts is by visualizing as much as possible of what is being said on the radio programme. The monitor need not be a highly skilled artist to present the structure of this programme with a simple blackboard drawing which might look something like Figure 6.

FIGURE 6. *A programme structure about milk*



The sophistication of the drawing or pictorial representation is not really important. If it helps the learner to concentrate on the essential parts of the lesson, it is a valuable learning device. Monitors must be encouraged to try all sorts of things to make the learning more concrete for their listening groups: models, simple maps and charts, animated figures—anything at all that helps the learner to proceed from things he already knows to new ideas, new concepts and new practices.

Getting from a realization of the concept to taking the necessary action, in this case buying a milk cow, comes about as the result of action-oriented discussion, which is a technique that every volunteer must thoroughly understand.

Discussion: from concept to positive action

Group discussion can be a very valuable learning device, but it can also lead to frustration and disappointment if it is not carefully structured. The monitor can lead the discussion himself, or a member of the group can be the leader, but someone has to establish a sense of direction to the discussion. If people are going to shout, argue, lose their tempers, refuse to listen to opposing points of view, nobody is going to learn anything. On the other hand, if a sense of mutual tolerance, respect and co-operation is established early in the discussion, it can be a fruitful and rewarding step leading toward positive action and implementation of the concept.

The reason for having a discussion as part of the learning programme is to bring out all the various facets or aspects of a particular problem. For instance, after the programme which stresses the need for milk as part of the daily diet, the group may wish to discuss some practical ways in which the concept can be put into practice. Members of the group need to talk about this new concept, compare ideas, explore alternatives and, in so doing, they make the information more real and more useful.

The monitor must realize that discussion after a broadcast has to lead somewhere. People will engage in discussion for a while because it is new to them but, eventually, some goal or goals must be identified which are immediate and practical.

You would need to direct the discussion toward the ways in which community co-operative effort can actually be put into practice in buying a milk cow among three or four families. How much will it cost? Who will take care of it? Can the representatives from the Ministry of Agriculture or the farm extension service be of assistance? Many questions

will arise in contemplating a community co-operative project and full discussion is a vital factor in arriving at satisfactory and practical answers.

A good example of discussion designed to bring about community action is described by Wilbur Schramm in his case study of the Radio Rural Forum in India:

> In India the forums meet twice a week, generally Tuesday and Friday, in the early evening. They begin with a radio program, thirty to forty-five minutes in length, broadcast from a station of All India Radio. This program usually follows the same format: answers to questions sent in by the forums, news from the forums including reports on action projects that have grown out of the discussions, and then a presentation of the main topic of the day. This presentation may be a dramatization, an interview, a talk, a recorded discussion among farmers or between farmers and an expert. In any case, the program poses a problem thought to be of importance to the villagers who belong to the forums, and often suggests possible solutions the village can adopt or new practices that can advantageously be put into effect. When the presentation is over, the radio is turned off, and the chairman leads the forum members in a discussion which typically lasts about thirty minutes and in any case is not permitted to go on longer than some pre-set time—usually thirty to forty-five minutes. The group is encouraged to decide on some action. If it does decide to take action as a result of the program and the discussion, or if it wants to ask for further information, this is reported back to the radio station by the convener, who acts as a secretary for the group. The action is reported or the questions are answered on a subsequent broadcast. Thus the forum is designed to bring about action as well as discussion, and to maintain continuing two-way communication, on development problems and plans, between the forum members in the village and the development officials associated with the forum broadcasts.

In this chapter I have tried to show that learning to become literate by means of radio programmes, supplementary materials and organized listening groups is a four-stage process: (a) acquiring and reinforcing basic literacy skills; (b) expanding basic skills; (c) developing concepts; and (d) putting concepts into action. As the radio-based literacy project develops and expands, the role of the field worker will take on new dimensions. New groups have to be organized, new volunteers have to be trained, but, at the same time, those who have completed the first cycle of literacy learning must be encouraged to maintain and improve their newly acquired skills.

CHAPTER SEVEN

Maintaining and improving literacy skills

The most important characteristic of the field worker at this next stage of the project is flexibility. You must respond to the needs of the participants in the project, and not force them into learning things they do not want to learn, or pursuing their learning at too fast a pace. Some listeners will want to repeat the basic course until they have mastered the ability to read and write, and to perform the basic operations in arithmetic. These people need confidence in themselves and their own abilities, a fact you must keep in mind as you continue to work with them. Their diligence and perseverance must be rewarded with praise and encouragement. The fact that they are repeating the course must not be associated with failure, as it so often is in the formal school setting.

Other listeners, however, will want to move along immediately to a more advanced course, so they can improve and expand their education. After many years of broadcasting a basic course followed by an intermediate course, Acción Cultural Popular of Colombia introduced an advanced course (*curso complementario*) by radio, which prepares people to take the examination for a primary school certificate. Listeners who enrol in the advanced course have acquired the fundamental skills in reading, writing and calculation, so they are able to absorb the programme material in science, social studies and other subjects taught in primary school. The listener follows this advanced course by radio for a year, or longer if he wishes, and as soon as he feels that he is ready, he presents himself to a teacher who is officially recognized by the Ministry of Education. The teacher administers an examination and, if the student passes, he is awarded a primary school certificate. For many people earning a primary school certificate is very important to their sense of self-estimation and prestige, and this desire to be officially recognized should not be overlooked as a strong motivating factor for some of the people who are enrolled in your basic and intermediate-level courses.

Other listeners will want to rest a while before going on with any kind

of structured learning. Or they may have been attending classes for five or six months, and now they have to devote their full energies to planting, harvesting or other seasonal agricultural activities. You should encourage these people to resume their studies when time permits, but it is especially important that they continue to receive suitable reading materials. Most of the research in literacy tells us that readers easily lose their newly acquired skills if they have neither the opportunity nor the materials for practice. If your project has been supplying materials to listening groups, it should be possible to continue to provide materials that are useful and challenging, even though the listeners have completed the formal courses. Magazines, newspapers, technical pamphlets, paper-bound books—any kind of reading material, in any format, is useful as long as people are stimulated to keep reading and developing their learning abilities.

Radio programmes for new literates

I have been concentrating in this book on designing and producing radio programmes that form an integral part of the instruction in literacy and fundamental education. Once the project is well under way and a large number of listeners have become accustomed to using radio as a means of education and information, you can ask the programme producers to offer regularly scheduled broadcasts which carry useful information in an entertaining format.

These broadcasts must entertain the listeners and, at the same time, they must provide them with stimulating ideas, useful information and opportunities to keep up their listening skills. A weekly, thirty-minute programme for the new literate might look something like this:

TIME	CONTENT
2–3 min:	A popular song, to capture the attention of the listening audience.
3–5 min:	Host and hostess greet the radio audience, welcome them to today's programme, then read three or four current news items of special interest to this audience.
2–3 min:	Another popular song.

3–5 min:	A sports figure is interviewed. He tells the audience how he and his team mates stay in good physical condition through a combination of good diet, adequate rest and regular exercise.
2–3 min:	Another popular song.
3–4 min:	A popular radio personality talks about preparing foods in an inexpensive way. Gives advice on how to buy certain foods, what to look for, etc.
2–3 min:	Another popular song.
3–4 min:	Letters from listeners.
2–3 min:	Host and hostess explain in detail one of the new items that they had presented earlier in the programme.
1–2 min:	A brief public service message announcing the opening of two new offices of the agricultural extension service.
1–2 min:	Host and hostess thank the audience for being with them—announce some of the features and guests of next week's programme.
2–3 min:	A closing popular song.

A broadcast such as this entertains the listeners and provides them with useful information. The 'letters from listeners' part is especially important in this kind of programming, since you want to encourage people to keep up their writing, as well as their listening and reading skills.

Radio programmes for field workers

It is also helpful if programmes for field workers are broadcast on a regular basis. In *Radio and television in literacy*, John Maddison describes a series of broadcasts of this type which were given in Iran:

> Part I of each teacher guidance broadcast begins with news of literacy and the campaign, and topical items of interest to the teachers; Part II

gives advice on running a class on functional literacy according to project standards, and the use of audio-visual aids . . . Part III is a live broadcast of a pilot-lesson in an actual teaching situation, a sort of 'radio-vérité' with the microphone following the master and catching pupils' replies, accompanied by a brief running commentary.

A weekly, thirty-minute programme designed for the continuing education of the field worker might look something like this:

TIME	CONTENT
3–5 min:	Welcome to today's programme—brief musical interlude —host talks about the theme for the day—how to help listening groups to form their own co-operatives.
3–5 min:	Short dramatic segment . . . field worker is trying to convince a member of a listening group to join a co-operative. Student says it is too much trouble, too much time, not worth the effort, etc. Field worker tries to convince him that it would be helpful to him and his family—explains the benefits of sharing resources.
2–3 min:	A popular song, sung and played by a field worker in the literacy project. Lyrics contain words like 'sharing', 'helping', 'saving', and so forth.
3–5 min:	Host returns to explain more about co-operatives . . . how to get started, how to fill out the required forms, how local representatives can help.
3–5 min:	News of the projects—audio tape reports from various regions of the country—actual voices of field workers recorded in their own towns and villages. At least one report from a successful co-operative.
3–4 min:	Another song, sung and played by a field worker from a different region. Humorous song about a man whose pockets were always empty.
3–4 min:	Interview with an official from the Ministry of Agriculture about the advantages of co-operation in agriculture—buying cheaper seed and fertilizer, sharing tools and equipment.

3–4 min:	Letters from field workers—letters of general interest selected to be read and answered on the programme. One letter with typical question about co-operatives.
2–3 min:	Host makes his closing comments, talks briefly about the theme for next week's programme: how to make simple, inexpensive audio-visual aids.
1–2 min:	Closing music. Repeat some of the lyrics which contain words 'sharing', 'saving', 'helping'.

Broadcasts which carry news of the activities of field workers throughout the country, suggestions for motivating learners and volunteers, and news of organizational activities can be stimulating in giving field workers a sense of unity and solidarity, and they should be produced on a regular and continuing basis.

In summary, you, as a field worker in a radio-based literacy project, can play an important role in helping learners to maintain and improve their literacy skills. You can see to it that they are supplied with reading materials that are appropriate to their level of learning, you can stimulate them to keep up their learning activities, and you can suggest to the producers that they develop programmes of an entertaining and stimulating nature for the new literates. As far as maintaining your own skills is concerned, you can suggest that regular programmes be offered that carry new ideas and suggestions for your work, news of the project and models of teaching and discussion.

In the next chapter, we will examine the role the field worker plays in making the project even more effective by providing evaluation of the learning results, and relaying this information back to programme producers and project administrators.

CHAPTER EIGHT

Evaluation and feedback

Throughout this book I have been emphasizing the role of the field worker as the essential link between programme producers at one end and learners in the radio audience at the other end. In the last two or three chapters on programming, production and organization, I have placed most of the emphasis on the flow of radio programmes and supplementary materials *from* producers *to* consumers; now it is time to consider how information or 'feedback' flows *to* producers *from* consumers. In this chapter we will consider how the field worker evaluates the effects the programmes and materials are having, and how he feeds this information back to the producers and administrators of the project.

Quite often people become apprehensive when they hear the word 'evaluation'. They assume that evaluation means the construction of questionnaires, the design of survey instruments, the selection and management of control groups and statistical analysis of data. While it is true that evaluation can involve many of these sophisticated research techniques, you must not lose sight of the essence of evaluation.

What you need to find out about any literacy project, whether it uses radio broadcasting or not, is how successful you are in what you are doing. You need to ask such questions as 'are we accomplishing our objectives?', 'are people learning to read and write in a reasonable period of time?', 'are they putting what they learn into practice to improve family health and nutrition practices?' Although it is over-simplified to talk about evaluation in these general terms, this is what evaluation is really all about—it is trying to find out how successful or unsuccessful you have been, and what modifications or corrections are necessary to the continuation of the project.

This is why you should not think of evaluation as a step that takes place only at the end of a project. It is not an 'end of project' activity; it is rather,

a continuous process of gathering information, evaluating it, drawing conclusions and using the information to re-design and re-produce new programmes and supplementary materials for the benefit of the learners.

Specific problems of measuring the effects of radio broadcasting

You no doubt realized after working with radio for only a few weeks that evaluating the effects of any mass medium such as radio or television is very difficult, especially if a large part of your audience lives in a rural area. In the initial stages of the project you should have a fairly good idea of the number of people who are participating, the number of volunteers who are undergoing training and the amount of printed material that is being distributed. As the project expands, however, you have no way of knowing how many people are following the course on an informal, non-registered basis, or just listening to an occasional radio programme. Word gets around about the radio programmes; people pass materials from family to family; learners become more confident in themselves and their own abilities and they volunteer to help others—which is just as it should be—you want your project to expand and reach as many people as possible. My point, though, is that when you try to estimate how many people are benefiting from the programmes and materials, there is always a certain amount of guesswork involved.

This is why it is important to establish a good communications network among volunteers, other field workers, village or town officials, and as many families as you can contact individually. The volunteers who work with individual listening groups will be your best source of information about the effects of the broadcasts since they have first-hand knowledge about the progress and problems of individual learners. Based on the information that the volunteer workers or monitors provide you with, you can get at least a rough idea of the number of people in your area who are participating in the project, and you will be able to provide the project administrators with much of the basic information they need to have about adult learning characteristics.

The kinds of information needed

In his book on *Broadcasting for adult education,* Ignacy Waniewicz notes that the areas in which feedback observations are required can be classified into several groups: (a) questions concerning current broadcast output;

(b) questions concerning activities of the groups; (c) questions concerning possible immediate social effects; (d) questions concerning technical problems; (e) questions concerning supervision.

Within the first category of questions, you are interested in finding out if the radio broadcasts are being received by members of the audience, and if the programmes are understandable, interesting and useful. Are there problems with regard to the broadcast schedule? Are the programmes about the right length? And are the supplementary materials useful and provocative?

In the second and third categories, you are very dependent on the information that is provided to you by the volunteer workers. They will be able to tell you if the learners attend the listening group regularly, what kinds of questions they ask, and if they participate in discussions as a result of the programmes. You will also want to know if the discussions lead to specific actions and what influence, if any, the actions taken by listening groups have on the entire community.

In the fourth category of questions, you want to find out if the programmes are received clearly, if there are adequate maintenance and repair services, and if there is sufficient supply of supplementary materials.

Finally, in the last category of questions, you are concerned primarily with administrative and organizational information. Are field workers receiving necessary information and support services from the project administration? Is there an opportunity for field workers to share information and experiences? Are certain regions under-represented as far as services are concerned? And what is the morale of people who are associated with the literacy project?

It may seem that a lot of information must be gathered about the effectiveness of the radio broadcasts, the supplementary materials and the personal communication efforts of volunteers and field workers, but if you can develop some questionnaires or evaluation forms for you and your volunteer workers to use, you can simplify the task considerably. In the next few pages, I would like to give you some idea of the different kinds of forms that have been used to gather information about literacy projects.

Forms for gathering information

You should try to achieve a reasonable balance, when designing evaluation forms or questionnaires, between an extremely detailed form that yields

a great deal of information, and one that is too simple and yields little information. Volunteers are likely to be busy with other responsibilities and they cannot be expected to spend a lot of their time in filling out complicated and detailed questionnaires. On the other hand, if you over-simplify the forms, you may get only the most superficial kind of information which is of minimal use in making long-range plans for programme improvement.

Form I: Basic information about the members of each learning group
Each volunteer should be given a supply of forms on which he enters the name, age, education and occupation of each member of his listening group. The volunteer should use this form to record attendance and, at the end of each month, he should forward it to the field worker who is in charge of his geographic area. The form can be very simple in its design, looking something like Figure 7.

FIGURE 7. *Basic information form*

Volunteer's Name _____ Month _____

Meeting Place _____

Name of student	Age	Education	Occupation	Attendance
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

Form II: Reporting one complete learning session: pre-broadcast, broadcast and post-broadcast activities
This form is intended to give you as much information as possible about what happens during a learning session without making excessive demands on the volunteers' time (Figure 8).

FIGURE 8. *Learning session reporting form*

Name of Volunteer ..... Date of Meeting .....

Date of Broadcast ..... Place of Meeting .....

1. Is the information contained in the broadcast:
   a. clear?
   b. stimulating?
   c. useful?
2. What questions are asked by the learners after the broadcast?
   a.
   b.
   c.
3. What points were discussed by the learners after the broadcast?
   a.
   b.
   c.
4. What decisions were made or actions taken with regard to any points raised in the broadcast?
   a.
   b.
   c.
5. Comments on quality of radio broadcast reception and suitability of supplementary materials.
6. Student comments about their own learning.

You may add on, modify or change these forms in any way you choose in order to provide yourself with the kinds of information you want. One of the crucial questions is, of course, are people learning to read and write as a result of these programmes? The volunteers will not be able to give you precise, scientific information about the learning progress that their students are making, but they should be able to tell you in fairly general terms that students have achieved a reading vocabulary of so many words, that they can construct simple sentences and so forth. You should include a section on the form where they can write some general comments at the end of each month about the progress their students are making, what

learning problems they are having and any suggestions for specific changes or modifications in the programmes or the materials.

You can use this evaluation form yourself, or one similar to it, when you make personal visits to the learning groups in your area. You would undoubtedly wish to add on a section for your own comments about the individual volunteer worker that you are observing; is the volunteer effective in the pre-broadcast phase?; is he actively involved during the programme?; is he effective in answering questions, stimulating discussion and suggesting positive action to the members of the group?

Form III: A field worker's monthly summary report

Finally, you might find it useful to have a specific form in order to summarize your observations, comments, criticisms and suggestions to the regional or principal office where your information will be evaluated by specialists in research and evaluation (Figure 9).

FIGURE 9. *Field worker's monthly summary report form*

Field Worker's Name	Month of Report .....
Village or Town	Number of listening groups in area .....

1. Number of reports received from volunteers this month:
2. Number of personal visits to listening groups in your area:
3. General observations about the broadcasts and materials:
4. General observations about broadcast reception, condition of receivers, availability of maintenance services:
5. General observations about the effectiveness of the volunteer workers:
6. General observations about the rate of learning that is taking place:
7. Specific comments, suggestions, observations, criticisms with regard to the programmes, supplementary materials, training methods used for volunteers:
8. Specific community action programmes, home improvement programmes, nutrition programmes that were influenced by the project:

Incorporating feedback into programme design

When you have collected all the available comments and observations from listeners and volunteers and added your own summaries and suggestions, you must get this valuable information back to the administrators of the project. If you live fairly close to the principal office, you can deliver the information in person, and spend some time talking to your collaborators in programming, research and evaluation. Your insights will be valued by these people and you will find that the personal contact is a more effective means of feedback than exchanging points of view and observations by mail.

In the project headquarters, specialists in research and evaluation and programme designers will study the information which has been supplied by field workers from all over the country. They will look for general trends, evidence of successes and failures, and conflicting points of view. They will most likely devise questions, test and measurement devices and other instruments for gathering more information about learning progress, attitude change and behavioural change and, eventually, all of this information on the project will be used to make modifications, corrections and improvements to the radio programmes, supplementary materials and listener services.

New programme formats will be devised, experiments with different content will be set up, different kinds of supplementary material will be produced and, after six months or a year, the evaluation and feedback process will take place all over again.

The cycle begins, the cycle ends—another cycle begins and ends—and so it goes throughout the life of the project.

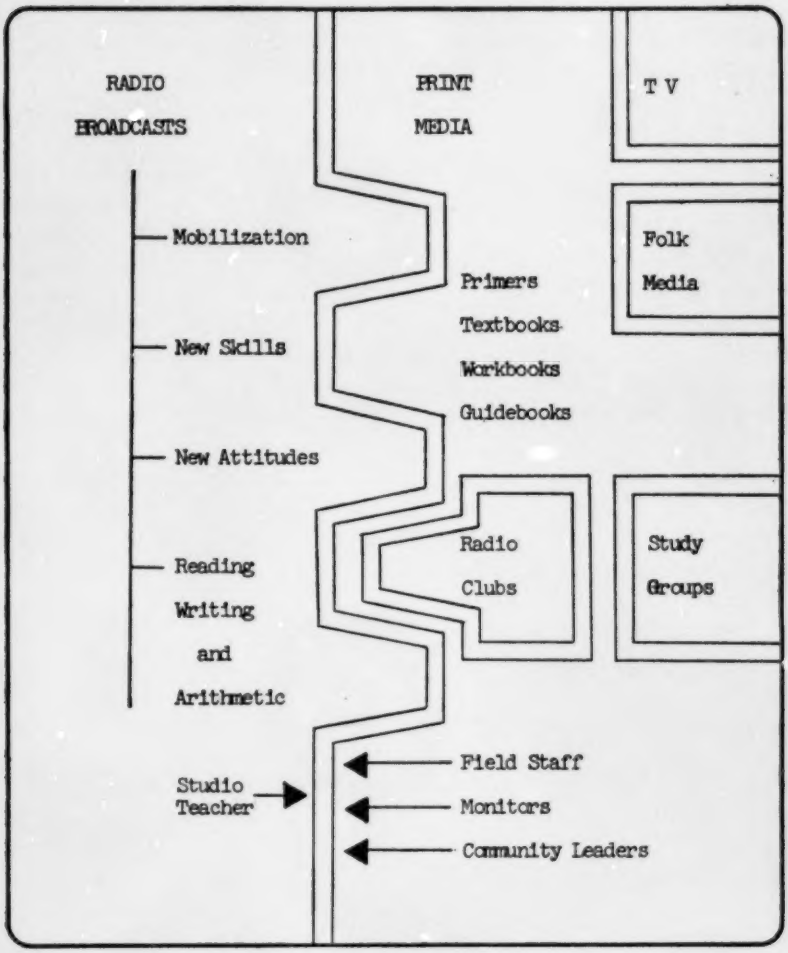
Now that we have almost come to the end of the monograph, perhaps you can see more clearly how you as a field worker fit into an over-all learning system which looks something like Figure 9.

Each element in the system makes its own contribution. Each element affects and is affected by every other element in the learning system. The learner is the centre of the system, and you as a literacy field worker are also at the centre of the system—making things work, seeing to it that all of the learning resources are used efficiently and wisely.

People have incessant needs for information, education and stimulation. As their capacities develop, their needs change, and you as a field worker can take pride in knowing that you are instrumental in helping people to improve their lives by acquiring literacy and the other fundamental skills of a humane basic education.

In the next chapter, you will find some suggestions for further reading and a list of organizations that will be helpful to you in expanding your knowledge about the use of radio in adult literacy education.

FIGURE 9. *The literacy project learning system*



CHAPTER NINE

Sources of information

In this chapter I am not going to list an extensive bibliography of books, magazine articles and reports concerning the use of radio in adult literacy education. Instead, I am going to recommend to you a few books which are very basic in treating this subject. All of the books have good bibliographies and all of them are obtainable in most parts of the world.

In addition to the books, I will list a few journals that frequently carry articles on adult literacy and the mass media of communication and, finally, I will suggest some organizations which can give you important help and guidance simply for the trouble of writing them a letter.

Radio and television in literacy, published by Unesco in its series of 'Reports and papers on mass communication', is a survey of the use of the broadcasting media in combating illiteracy among adults. Chapter One describes the uses of radio and television in connexion with literacy work in forty selected countries. Chapter Two covers such topics as: reasons for using broadcasting; concepts of literacy; the broadcasting end—methods, materials, experiences; the 'dialogue'—methods, materials, experiences at the receiving end; and feedback and follow-up results. This chapter offers extracts from first-hand accounts of the experiences that various countries have had in producing broadcasts for literacy work. In Chapter Three, 'Summing up and looking forward', Maddison notes that two important lessons emerge from the survey:

1. *All* the various ways of using radio and television should be fully explored in all countries with a sizeable problem of illiteracy;
2. This should be done as part of an over-all plan to develop the new techniques of communication for economic and social and, especially, educational advancement.

The book concludes with three appendixes: the questionnaire that was used to solicit the information from forty countries, as well as detailed replies to the questionnaire from Jamaica, Yugoslavia and Tunisia; specimens of various kinds of printed or graphic materials, including

scripts used in support of literacy broadcasts; and a bibliography of books and articles on the use of radio and television in literacy education.

In *Broadcasting for adult education*, published by Unesco in 1972, Ignacy Waniewicz explains that his aim in writing the book has been 'to give guidance on how to devise an education project involving the use of radio and television; how to bring about and organize the close co-operation of the development-planner, educator, broadcaster, and subject matter specialist in all the stages of development of such a project; how to draw the attention of educators to the special features of the media which should not be neglected in the teaching-learning process and, on the other hand, of broadcasters to the special demands of an educational message. In other words, the emphasis is on the contact-areas between the different specialists involved in the shaping and implementation of educational communication programmes.'

Waniewicz writes about conditions of efficiency and defining the objectives; programme planning and production; utilization and feed-back; and training of personnel. His style of writing is clear and understandable and, although he deals with both radio and television in the service of adult education in general, much of what he has to say is interesting and directly applicable to the use of radio in literacy education.

Another valuable source of information are the three volumes published in 1967 by Unesco and the International Institute for Educational Planning under the general series title *New educational media in action: case studies for planners*. A fourth volume entitled *The new media: memo to educational planners* by Schramm, Coombs, Kahnert and Lyle is an over-all summary report and conclusions on the project.

Many of the case studies described in these volumes deal with projects involving radio and television in formal education, but a few case studies deal directly with radio and television in adult education, especially 'Ten years of the radio rural forum in India'; 'Teaching literacy by television in the Ivory Coast'; Radiovision as an aid to literacy teaching in Niger'; 'Radio clubs in Niger'; and 'The radio schools of Honduras'.

Of special value in each of these case studies is the section devoted to economic analysis. An estimate is made of total investment in programme production, transmission and reception. Current costs of administration and programming, transmission and reception are calculated to arrive at costs per hour of broadcast time and cost per student. The research underlying these studies was conducted in 1965–66, so that the cost figures are well out of date and would not be applicable to present projects. You can, however, take a rough estimate of general cost increases over the past

ten years, so the information would be helpful on a relative cost basis. (*Radio and television in literacy, Broadcasting in adult education* and the four volumes of case studies and summary are available through national distributors of Unesco publications in many countries. If you write to Unesco, Commercial Services, 7 Place de Fontenoy, 75700 Paris (France), they will send you the publications directly. They can also provide you with the address of your nearest distributor in case you want to buy other books or reports sometime in the future.)

Radio's role in development: five strategies of use, by Emile G. McAnany, was published by the Academy for Educational Development (United States of America) in 1973. The focus of McAnany's book is on 'radio in the rural setting of developing countries where it may have the greatest potential for aiding human growth and development'.

McAnany has devised five utilization strategies to describe how radio is used: (a) Open broadcasting: the unorganized audience; (b) Instructional radio: the organized learning group; (c) Radio rural forums: the decision group; (d) Radio schools: the nonformal learning group; (e) Radio and animation: the participating group. He uses examples from many different kinds of radio-based projects throughout the world and observes that efforts to use radio for rural development have been largely fragmented; that governments are not giving high priority to rural development, or are not using radio as a part of this effort; that upon close inspection of existing projects radio is reaching only a minute fraction of its potential audience; that there is very little good evidence about the effectiveness, much less cost-effectiveness, of these projects; that the context in which a radio project operates is of fundamental importance; and that the projects he reviewed lack both planning and careful administrative follow-through.

McAnany concludes his study with several recommendations about the role that radio should play in education and social change in the rural areas of the world. Although the book is only twenty-eight pages in length, it is packed with useful information and I recommend it to you very highly. (McAnany's book is available from the Academy for Educational Development, 1424 Sixteenth Street N.W., Washington, D.C. 20036 (United States of America).)

Periodical publications

Adult education, published by the National Institute of Adult Education, 35 Queen Anne Street, London W1M 0BL (United Kingdom), carries articles of general interest such as 'Community development—a network

approach'; 'Adult education and broadcasting—50 years of co-operation'; and 'Toward a theory of life-long education'.

Adult education and *Adult leadership* are both published by the Adult Education Association of the United States of America, 810 Eighteenth Street N.W., Washington, D.C. 20006. *Adult education*, sub-titled 'A journal of research and theory in adult education', carries articles such as 'Professional obsolescence: implications for continuing professional education'; 'Developing a strategy for adult education via mass media'; 'Women's education in colonial America'; and 'Reflections on means and ends in adult basic education'. *Adult leadership* carries articles primarily concerned with the practical aspects of adult education such as 'The community forum concept: an alternative in public affairs education'; 'Literacy instruction—an opinion survey of persons in adult education'; and 'College credit by radio: an adventure in education'.

Convergence is an international journal of adult education published by the Ontario Institute for Studies in Education, 252 Bloor Street W., Toronto, Ontario M5S 1V6 (Canada). The text and summaries of articles are in English, French, Russian and Spanish, and a recent sampling of articles includes 'Rural adult learners in Asia and Africa: a research concept'; 'Adult education and programmed learning'; 'The National Literacy Programme in Jamaica' and '*Mtu ni afya:* Tanzania's mass health education campaign'.

Educational broadcasting international (formerly *Educational television international*), published by Wynn Williams Ltd., Centenary Buildings, King Street, Wrexham (United Kingdom) and Headington Hill Hall, Oxford OX3 0BW (United Kingdom), carries quite a few articles on mass media and national development including 'Health education—A campaign for radio study groups in Tanzania'; 'Planning for the development of educational media in Thailand'; 'Programming for the Satellite Instructional Television Experiment in India'; and several articles on educational radio production techniques. The text of the articles is English, but summaries in French and Spanish are provided.

Literacy discussion and *Literacy work* are published by the International Institute for Adult Literacy Methods, P.O. Box 1555, Tehran (Iran). (The French edition of *Literacy discussion* is *Discussion sur l'alphabetisation.*) 'The evaluation of the UNDP/Unesco Work-Oriented Adult Literacy Project in Tanzania'; 'An examination of three Paulo Freire-inspired programmes of literacy education in Latin America'; and 'Unesco's work-oriented approach to literacy' are articles which have appeared in recent issues of *Literacy discussion.*

In addition to the journals I have mentioned above, there are some others which might be of interest to readers in various parts of the world:

1. *ASPBAE Journal,* (Asian South Pacific Bureau of Adult Education)
   17 B Inraprastha Marg,
   New Delhi 1 (India).

2. *Australian Journal of Adult Education,*
   University of New South Wales,
   Division of Postgraduate Extension Studies,
   Box 1, Kensington,
   Sydney, N.S.W. 2033,
   (Australia).

3. *Indian Journal of Adult Education,*
   Indian Adult Education Association,
   17-B Indraprastha Marg,
   New Delhi 1 (India).

4. *Kenya Journal of Adult Education,*
   Board of Adult Education,
   Box 30547,
   Nairobi (Kenya).

5. *Lagos University Continuing Education Centre Occasional Papers,*
   University of Lagos,
   Continuing Education Centre,
   Yaba, Lagos (Nigeria).

Organizations

Since most of the books I recommended were published under the auspices of Unesco (United Nations Educational, Scientific and Cultural Organization, 7 Place de Fontenoy, 75700 Paris (France)), you have no doubt gathered that Unesco has played a very prominent role in the world-wide campaign against illiteracy. In addition to the three books I have mentioned, Unesco publishes a series of 'Reports and papers on mass communications', the quarterly journal *Prospects* which is devoted to issues in education, and numerous papers, opinions and reports of seminars and meetings held all over the world.

Other agencies within the United Nations System have also taken an

active interest in the fundamental education of adults, and there are reports and papers available from FAO (Food and Agriculture Organization), WHO (World Health Organization) and IBRD (International Bank for Reconstruction and Development, more commonly known as the World Bank). If you write to Unesco in Paris, they can facilitate your search for information and advice from these and other United Nations organizations.

There are far too many development organizations and foundations in the world to list them all in this chapter, so I am going to conclude with a selected list of organizations which have a good reputation for gathering, preparing and disseminating information for the benefit of literacy educators all over the world.

Academy for Educational Development,
1424 Sixteenth Street N.W.,
Washington, D.C. 20036,
(United States of America).

Acción Cultural Popular
(Radio Sutatenza),
Calle 20, 9–45,
Apartado Aereo 7170,
Bogota (Colombia).

International Institute for Adult Literacy Methods,
P.O. Box 1555,
Tehran (Iran).

Laubach Literacy International,
Box 131,
Syracuse, New York 13210,
(United States of America).

Indian Adult Education Association,
17 B Indraprastha Marg,
New Delhi 1 (India).

Literacy Volunteers of America,
222 West Onondaga Street,
Syracuse, New York 13202,
(United States of America).

Regional Center for Functional Literacy in Rural Areas in Latin America (CREFAL),
Quinta Eréndira,
Patzcuaro,
Michoacan (Mexico).

Society for the Promotion of Adult Literacy in Africa,
P.O. Box 12511,
Nairobi (Kenya).

World Education,
1414 Sixth Avenue,
New York, New York 10019,
(United States of America).

Other titles in *Literacy in development: a series of training monographs*, Series editor, H. S. Bhola, Professor of Education, Indiana University at Bloomington, Indiana, United States of America:

Learning to read and reading to learn: an approach to a system of literacy instruction, by Sohan Singh

Programmed instruction for literacy workers, by S. Thiagarajan

Understanding visual literacy and communication, by Anne C. Zimmer and Fred A. Zimmer

The ABCs of literacy: lessons from linguistics, by Kenneth L. Baucom

Evaluating functional literacy, by H. S. Bhola

Towards scientific literacy, by Frederick J. Thomas and Allan K. Kondo